

Project ID: 18-0142

Phase 1: Study of PFAS Compounds on the Chattooga River

Chattooga and Walker County, GA

Cherokee and Etowah County, AL

Project Date: April 24-25, 2018

Report Date: June 13, 2018

Project Leader: Derek Little, PE

Ecology Section

Field Services Branch

Science & Ecosystem Support Division

USEPA – Region 4

980 College Station Road

Athens, Georgia 30605-2720

The activities depicted in this report are accredited under the US EPA Region 4 Science and Ecosystem Support Division ISO/IEC 17025 accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation AT-1644.



Requestor:

Renea Hall
Drinking Water Section
Grants and Drinking Water Protection Branch
USEPA – Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-8960

Analytical Support:

Organic Chemistry Section
Analytical Support Branch (ASB)
Science & Ecosystem Support Division
980 College Station Road
Athens, GA 30605-2720

Approvals:**SESD Project Leader:**

Digitally signed by
DEREK LITTLE
Date: 2018.06.13
08:45:11 -04'00'

Derek Little, PE
Ecology Section
Field Services Branch

Approving Official:

**STACEY
BOX**

Digitally signed by
STACEY BOX
Date: 2018.06.13
09 05:57 -04'00'

Stacey Box, Chief
Ecology Section
Field Services Branch

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1.0 Introduction

Region 4 Water Protection Division (WPD) through the Drinking Water Section of the Grants and Drinking Water Protection Branch requested the assistance of the Science and Ecosystem Support Division (SESD) to determine background levels of per and polyfluoroalkyl substances or PFAS along the Chattooga River, Weiss Lake, and the Coosa River. PFAS are man-made chemicals that do not occur naturally in the environment and are persistent in the environment and the human body. Extensive information on PFAS can be found at <https://www.epa.gov/pfas>. EPA has established a health advisory level of 70 parts per trillion or equivalently 70 ng/L for drinking water for Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonate (PFOS) combined, both a subset of PFAS. For this study PFAS will refer specifically to compounds analyzed by SESD Analytical Services Branch (ASB) listed in Table 1.

A total of sixteen surface water locations were sampled for this study on April 24th and April 25th of 2018; ten in the Chattooga River watershed, two at the outfall of Weiss Lake, one on Weiss Lake, and three on the Coosa River. At the request of the WPD, sampling was conducted under high flow conditions to capture any affects from land runoff.

None of the Chattooga River samples had detectable concentrations of PFOA. Four out of the ten Chattooga River watershed samples had detectable concentration of PFOS, with a mean concentration of 28 ng/L; CT01 at 20 ng/L, CT02 at 21 ng/L, CT03 at 26 ng/L, and CT06 at 83 ng/L.

The remaining six sites had a mean PFOS concentration of 56 ng/L, and all but CR02 had detectable concentrations of PFOA with a mean of 41 ng/L. Stations CT07 and CT10 were the only stations to have no detectable PFAS. Field and trip blanks had no detectable PFAS. A duplicate sample was collected at CT09, the only analyte that was detected was PFPeA and both results, 18 and 17 ng/L, were J,Q-2 flagged.

2.0 Study Area and Sampling Plan

The Chattooga River originates in Walker County Georgia and feeds into Weiss Lake near Gaylesville, Alabama. Weiss Lake is an impoundment of the Coosa River discharging into the Coosa River in Leesburg, Alabama. The Oostanaula River, a tributary to the Coosa, has historically tested positive for the presence of PFAS.

The Chattooga sampling sites began in Gaylesville, AL and ended upstream La Fayette, GA. Two of the Coosa River sample locations coincided with regularly sample sites by Alabama Department of Environmental Management (ADEM) downstream of Weiss Lake. A third Coosa River sample was collected upstream of Weiss Lake in Georgia. Sampling activities were conducted in accordance with methods outlined in Phase 1: Study of PFAS Compounds on the Chattooga River Sample and Analysis Plan (SESDSAP-180142, 2018). Detailed locations and descriptions of the sample sites are provided in Table 2. A conceptual flow model for the Chattooga River samples is provided in Figure 1.

3.0 Field Methods

Grab samples were collected at each site and were analyzed by ASB for PFAS listed in Table 1. A two-person clean hands/dirty hands protocol was used. One member of the sampling team was designated clean hands and another as dirty hands. All operations involving contact with the sample container and sample media was conducted by the clean hands team member. All other preparations for sampling was performed by the dirty hands team member. At each station, two 15 ml extraction vials were filled to

approximately 5 ml. Samples were collected facing upstream for wadeable locations and upwind of the motor for the boating location. The clean hands member opened the vial 3 to 6 inches underwater to collect the sample. If overfilled, the sample was decanted to 5 ml. Samples were double bagged with Whirl-paks® and placed on ice.

After the sample collection at a station, *in situ* measurements of dissolved oxygen, pH, specific conductivity, and temperature were collected via a multiparameter data sonde. Turbidity was measured on a grab sample using a LaMotte portable turbidimeter. Sample locations were measured with a handheld GPS. Upstream and downstream pictures were also taken at each location where applicable. No flow measurements were possible due to high flows from recent rains. Standard operating procedures utilized are summarized in Table 3. Trip blanks, field blanks, and a duplicate were utilized for quality assurance purposes.

During sampling at station CT06, a pipe was observed actively discharging into the Chattooga River (Figure 26). The pipe, located on the southern side of the river, is most likely for storm drainage.

4.0 Results

All samples were analyzed by ASB using ASBPROC-800-R0, *Determination of Per- and Polyfluoroalkyl Substances in Water, Influent, Effluent and Wastewater by Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS)*.

PFOS was detected at sites CI00, GI00, CR01, CR02, CT01, CT02, CT03, CT06, OF01, and OF02. PFOA was detected at sites CR01, CI00, GI00, OF01, and OF02. Combined PFOA and PFOS concentrations were above the health advisory of 70 ppt at stations CI00, CR01, CT06, OF01, and OF02. Station GI00 total concentration of PFOA and PFOS was below the advisory at 64 ppt. The greatest total PFOA and PFOS concentrations was seen at CR01, 156 ng/L. PFOS and PFOA results are summarized in Table 5. Additionally, Figure 2 through Figure 4 provide maps of stations with PFOA and PFOS concentrations.

The U qualifier on the tables and maps denotes that the analyte was not detected at or above the reporting limit. The J qualifier in the results tables denotes the identification of the analyte is acceptable; the reported value is an estimate. An accompanying Q-2 qualifier denotes that the result was greater than MDL but less than MRL, hence the estimate qualification.

Concentrations of other PFAS compounds are summarized in Table 6 through Table 11. No PFAS compounds were detected at CT07 or CT10. No PFAS compounds were detected in field or trip blanks. FB2 was misclassified as an air blank within Scribe but is a water field blank. Sample CT09-D was a duplicate sample of CT09. Perfluoropentanoic acid (PFPeA) was the only PFAS analyte detected in samples CT09 and CT09-D at an estimated 18 ng/L and 17 ng/L, respectively.

Field *in situ* measurements are summarized in Table 4 along with sample dates and times.

5.0 Discussion and Recommendations

Within the Chattooga watershed, no PFOA was detected during sampling. PFOS was detected at three of the Chattooga watershed sample locations with the furthest upstream at CT06. PFOS was not detected downstream from CT06 until CT03. Dilution from high flows may have resulted in non-detects of PFOA and PFOS at CT04 and CT05.

Further clarification of PFOS sources in the Chattooga watershed would be informed by a low flow sampling with additional sample locations between CT03 and CT06 on the mainstem of the Chattooga River and its tributaries. Tributaries of interest include Chappell Creek near CT06 and Taliaferro Creek between CT03 and CT04. Additionally, if the pipe at CT06 is discharging under dry conditions, sampling would be warranted.

6.0 References

SESDSAP-180142. (2018). *18-0142 Phase 1: Study of PFASs Compounds on the Chattooga River*. Athens, GA: U.S. EPA Region 4.

7.0 Tables

Table 1: PFAS Analytes

Analyte Name	CASRN	Acronym
Perfluorotridecanoic acid	72629-94-8	PFTrA
Perfluorododecanoic acid	307-55-1	PFDoA
Perfluoroundecanoic acid	2058-94-8	PFUdA
Perfluorodecanoic acid	335-76-2	PFDA
Perfluorononanoic acid	375-95-1	PFNA
Perfluorooctanoic acid	335-67-1	PFOA
Perfluoroheptanoic acid	375-85-9	PFHpA
Perfluorohexanoic acid	307-24-4	PFHxA
Perfluoropentanoic acid	2706-90-3	PFPeA
Perfluorobutyric acid	375-22-4	PFBA
Perfluorodecanesulfonate	335-77-3	PFDS
Perfluorononanesulfonate	68259-12-1	PFNS
Perfluorooctanesulfonate	1763-23-1	PFOS
Perfluoroheptanesulfonate	375-92-8	PFHpS
Perfluorohexanesulfonate	355-46-4	PFHxS
Perfluoropentansulfonate	2706-91-4	PFPeS
Perfluorobutanesulfonate	375-73-5	PFBS
Perfluorooctanesulfonamide	754-91-6	FOSA
Fluorotelomer sulfonate 8:2	39108-34-4	8:2FTS
Fluorotelomer sulfonate 6:2	27619-97-2	6:2FTS
Fluorotelomer sulfonate 4:2	757124-72-4	4:2FTS
N-(Heptadecafluorooctylsulfonyl)-N-methylglycine	2355-31-9	N-MeFOSAA
Propanoic acid, 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-	13252-13-6	HFPO-DA

Table 2: Sample Locations

	Station ID	Description	State	Latitude	Longitude
1	CI00	Weiss Lake	AL	Redacted	
2	CR01	Coosa Sample	GA		
3	CR02	NEE-13, Coosa River	AL		
4	CT01	Canyon Road	AL		
5	CT02	Cherokee County 97	AL		
6	CT03	Holland Chattoogaville	GA		
7	CT04	Lyerly Dam	GA		
8	CT05	USGS Station, GA-1	GA		
9	CT06	Martha Berry	GA		
10	CT07	Club Drive	GA		
11	CT08	Tate Rd	GA		
12	CT09	Shattuck Blvd	GA		
13	CT10	W Villanow St	GA		
14	GI00	Gadsden	AL	Redacted	
15	OF01	Outfall 1	AL		
16	OF02	Power Outfall	AL		

Table 3: Standard Operating Procedures Utilized

Field Measurement Procedures	SESDPROC-	Revision
Field pH Measurement	100	R4
Field Specific Conductance Measurement	101	R6
Field Temperature Measurement	102	R5
Field Turbidity Measurement	103	R4
Field Measurement of Dissolved Oxygen	106	R4
Global Positioning System	110	R4
In-Situ Water Quality Monitoring	111	R3
Field Sampling Procedures	SESDPROC-	Revision
Surface Water Sampling	201	R4
Divisional Quality Systems Documents	SESDPROC-	Revision
Logbooks	1002	R0
Quality System Procedures	SESDPROC-	Revision
Sample and Evidence Management	005	R3
Field Sampling Quality Control	011	R5

Table 4: in situ Measurements

Station	Date	Time	Dissolved Oxygen (mg/L)	pH	Temperature (°C)	Specific Conductivity (µS/cm)	Turbidity (NTU)
GI00	4/24/2018	12:40	8.60	6.97	17.70	151.0	10.0
CR02	4/24/2018	13:20	8.91	7.67	17.54	149.5	13.0
OF02	4/24/2018	14:15	8.95	7.86	17.76	151.0	11.0
OF01	4/24/2018	14:40	9.76	8.03	18.50	152.0	19.0
CI00	4/24/2018	15:15	9.56	8.14	18.23	155.0	7.8
CT01	4/24/2018	16:05	8.62	7.95	15.80	132.0	58.1
CT02	4/24/2018	16:30	8.97	7.84	15.57	124.5	70.1
CT03	4/25/2018	09:30	8.59	7.70	15.70	141.0	36.0
CT04	4/25/2018	09:55	9.01	7.82	15.61	149.4	27.0
CT05	4/25/2018	10:20	9.36	7.80	15.48	151.0	22.0
CT06	4/25/2018	10:45	8.77	7.85	15.30	183.0	15.0
CT07	4/25/2018	11:10	9.26	8.07	15.07	115.2	15.0
CT08	4/25/2018	11:30	9.07	8.16	15.30	126.8	23.0
CT09	4/25/2018	12:00	8.85	7.85	16.87	171.8	15.0
CT10	4/25/2018	12:15	8.80	7.94	15.53	230.8	6.6
CR01	4/25/2018	13:30	8.10	7.93	16.09	105.0	55.0

<i>Table 5: PFOA and PFAS Results</i>										
(ng/L)	GI00	CI00	CR02	OF01	OF02	CT01	CT02	CT03	CT06	CR01
PFOA	32 [†]	40	U	38 [†]	35 [†]	U	U	U	U	61
PFOS	32 [†]	37 [†]	46	55	73	20 [†]	21 [†]	26 [†]	83	95
Total:	64	77	46	93	108	20	21	26	83	156

[†]Result qualifier of J The identification of the analyte is acceptable; the reported value is an estimate and
Q-2 Result greater than MDL but less than MRL.

<i>Table 6: PFBA Results (ng/L)</i>			
Station	Result	Qualifier	Reporting Limit
CI00	18	J,Q-2	41
GI00	19	J,Q-2	41
OF02	20	J,Q-2	42
CT03	18	J,Q-2	39
CT04	18	J,Q-2	38
CT05	20	J,Q-2	38
CT08	18	J,Q-2	39
CR01	25	J,Q-2	41

Average 20

<i>Table 7: PFBS Results (ng/L)</i>			
Station	Result	Q	Reporting Limit
CI00	130		41
GI00	120		41
OF01	110		41
OF02	120		42
CR02	120		38
CT01	27	J,Q-2	39
CT02	23	J,Q-2	41
CT03	29	J,Q-2	39
CT04	22	J,Q-2	38
CT05	22	J,Q-2	38
CT08	28	J,Q-2	39
CR01	210		41

Average 80

Table 8: PFDA Results (ng/L)

Station	Result	Q	Reporting Limit
OF02	43	J,Q-2,QS-3	83

Table 9: PFHpA Results (ng/L)

Station	Result	Q	Reporting Limit
GI00	16	J,Q-2	41
CI00	21	J,Q-2	41
CR02	17	J,Q-2	38
OF01	19	J,Q-2	41
OF02	20	J,Q-2	42
CT03	15	J,Q-2	39
CT04	20	J,Q-2	38
CT05	18	J,Q-2	38
CR01	20	J,Q-2	41

Average 18

Table 10: PFHxA Results (ng/L)

Station	Result	Q	Reporting Limit
GI00	51		41
CI00	33	J,Q-2	41
CR02	47		38
OF01	42		41
OF02	47		42
CT01	100		39
CT02	68		41
CT03	91		39
CT04	66		38
CT05	78		38
CT08	63		39
CR01	59		41

Average 62

Table 11: PFPeA Results (ng/L)

Station	Result	Q	Reporting Limit
GI00	68		41
CI00	71		41
CR02	72		38
OF01	70		41
OF02	75		42
CT01	130		39
CT02	120		41
CT03	110		39
CT04	160		38
CT05	170		38
CT06	30	J,Q-2	41
CT08	130		39
CT09	18	J,Q-2	39
CT09	17	J,Q-2	39
CR01	80		41
Average	88		

8.0 Figures

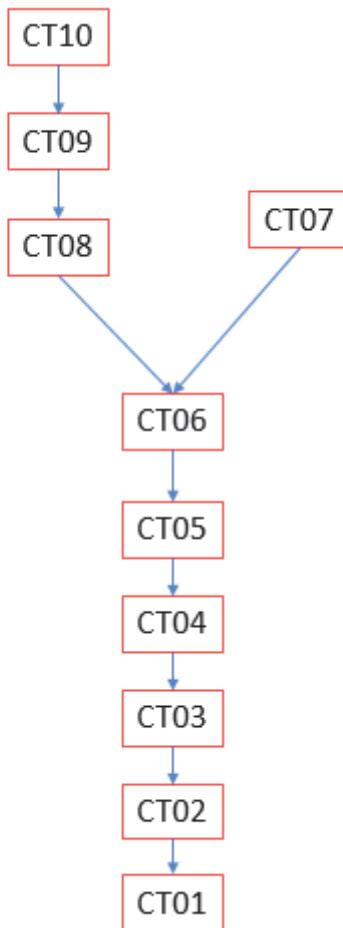


Figure 1: Chattooga Stations Conceptual Flow Model

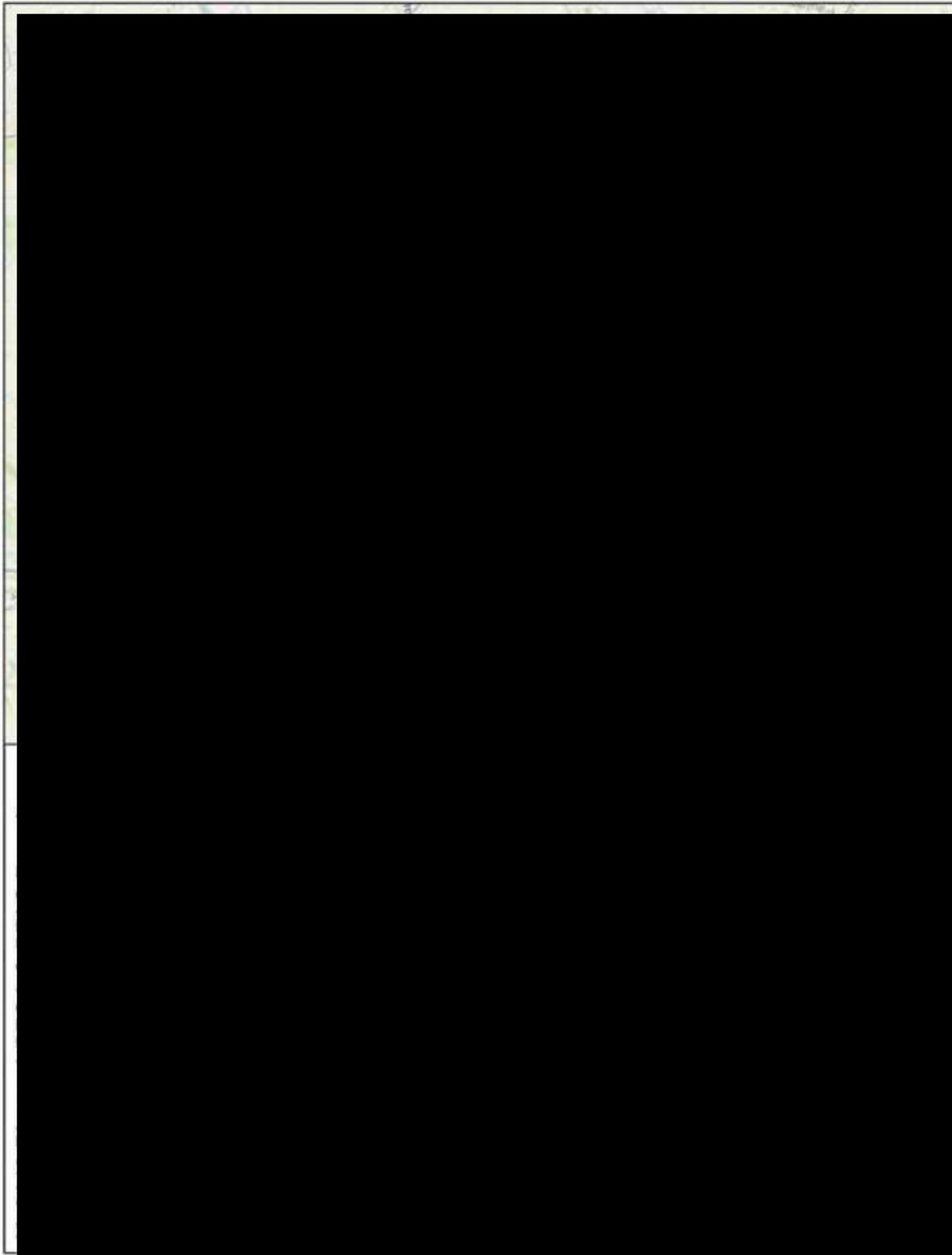


Figure 2: PFOA & PFOS Sample Results

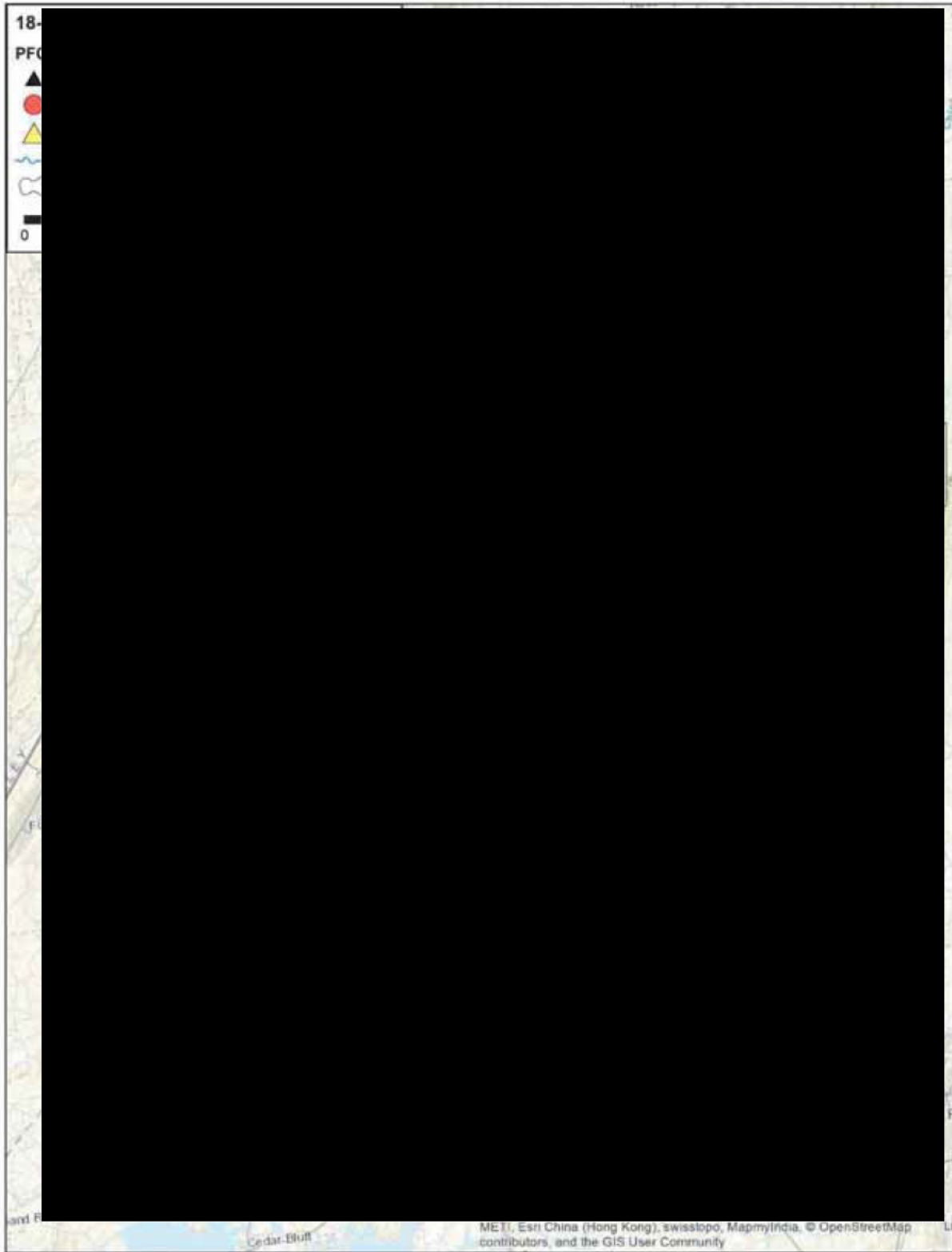


Figure 3: Chattooga Watershed PFOA & PFOS Results

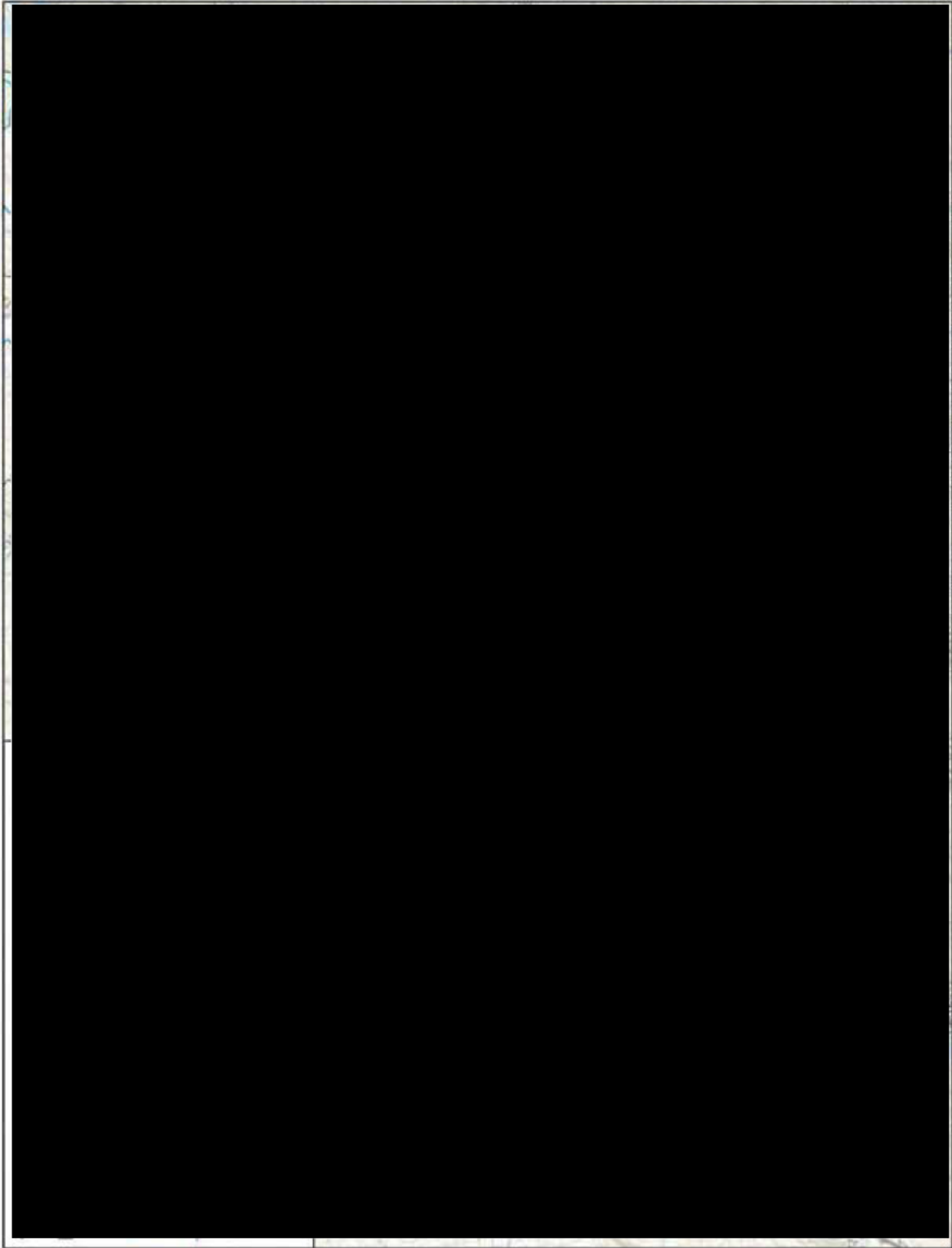


Figure 4: Weiss Lake and Coosa River PFOA & PFOS Results

9.0 Pictures

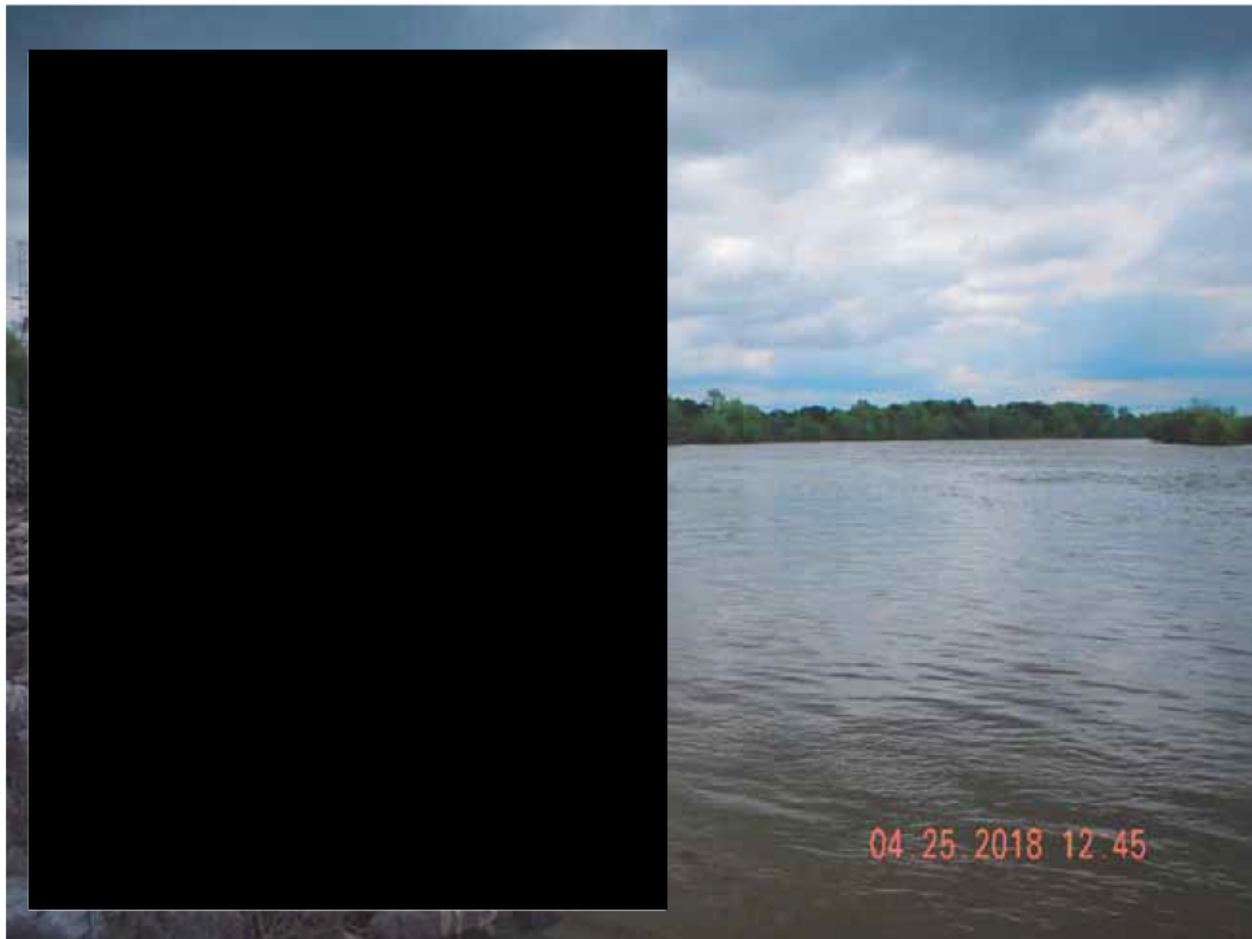


Figure 5: GI00 Upstream View

Note: Camera dates on photos are one day ahead.



Figure 6: GI00 Downstream View



Figure 7: CR02 Upstream View



Figure 8: CR02 Downstream View

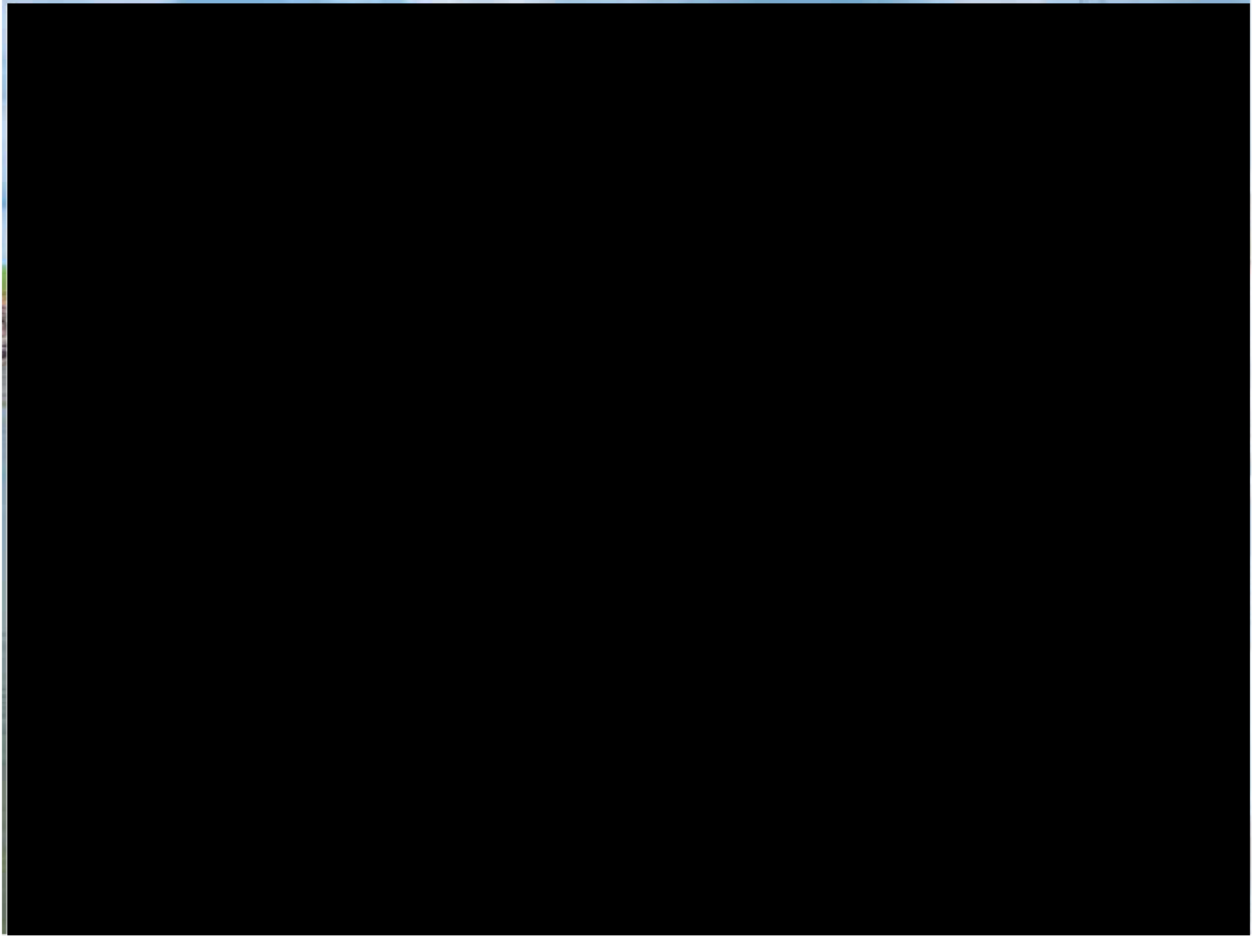


Figure 9: OF02 Upstream View



Figure 10: OF02 Downstream View



Figure 11:OF01 Upstream View



Figure 12: OF01 Downstream View



Figure 13: CI00 Lake View



Figure 14: CT01 Upstream View



Figure 15: CT01 Downstream View



Figure 16: CT02 Upstream View



Figure 17: CT02 Downstream View



Figure 18: CT03 Upstream View



Figure 19: CT03 Downstream View



Figure 20: CT04 Upstream View



Figure 21: CT04 Downstream View



Figure 22: CT05 Upstream View



Figure 23: CT05 Downstream View



Figure 24: CT05 Upstream View

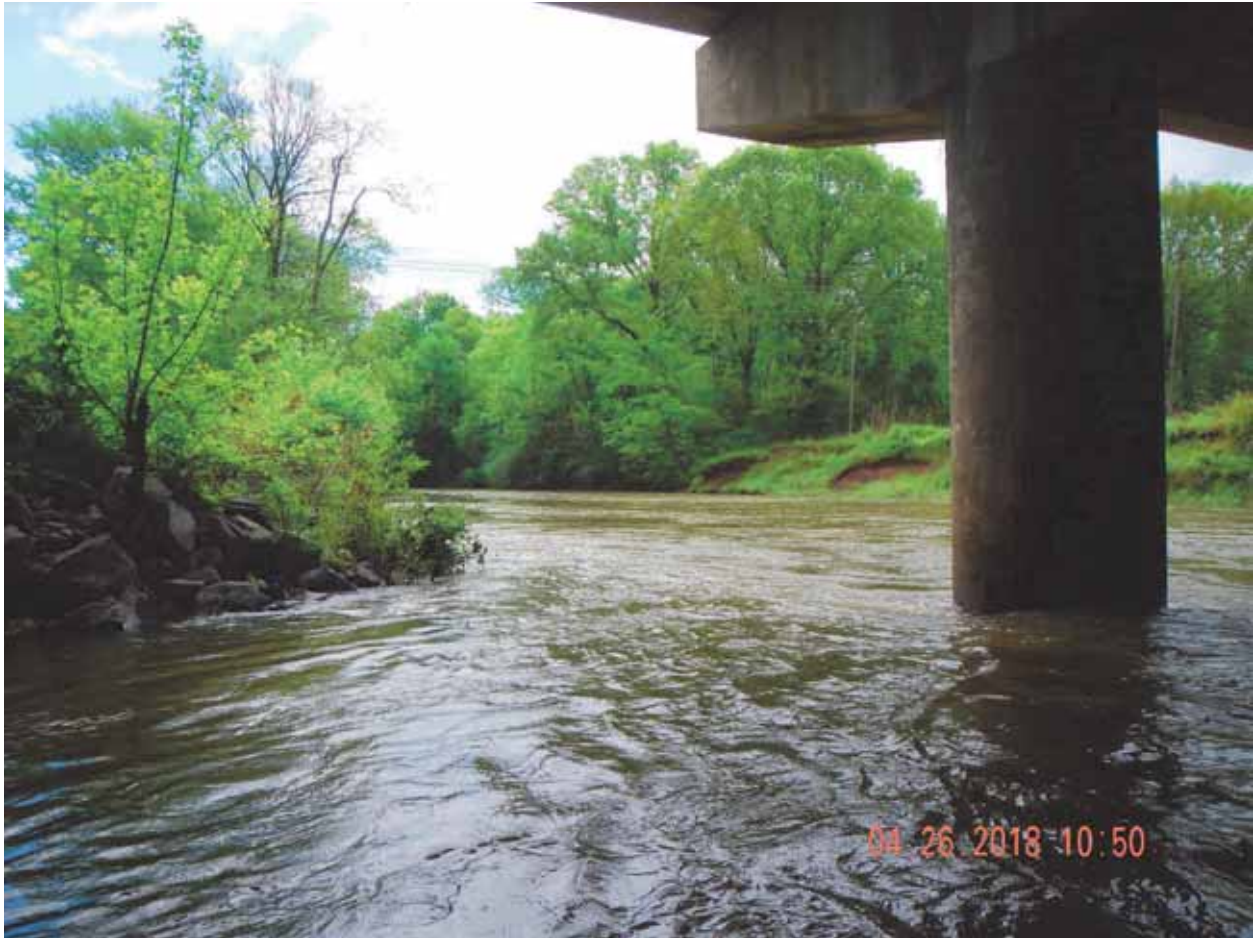


Figure 25: CT06 Downstream View



Figure 26: CT06 Unknown Pipe



Figure 27: CT07 Upstream View

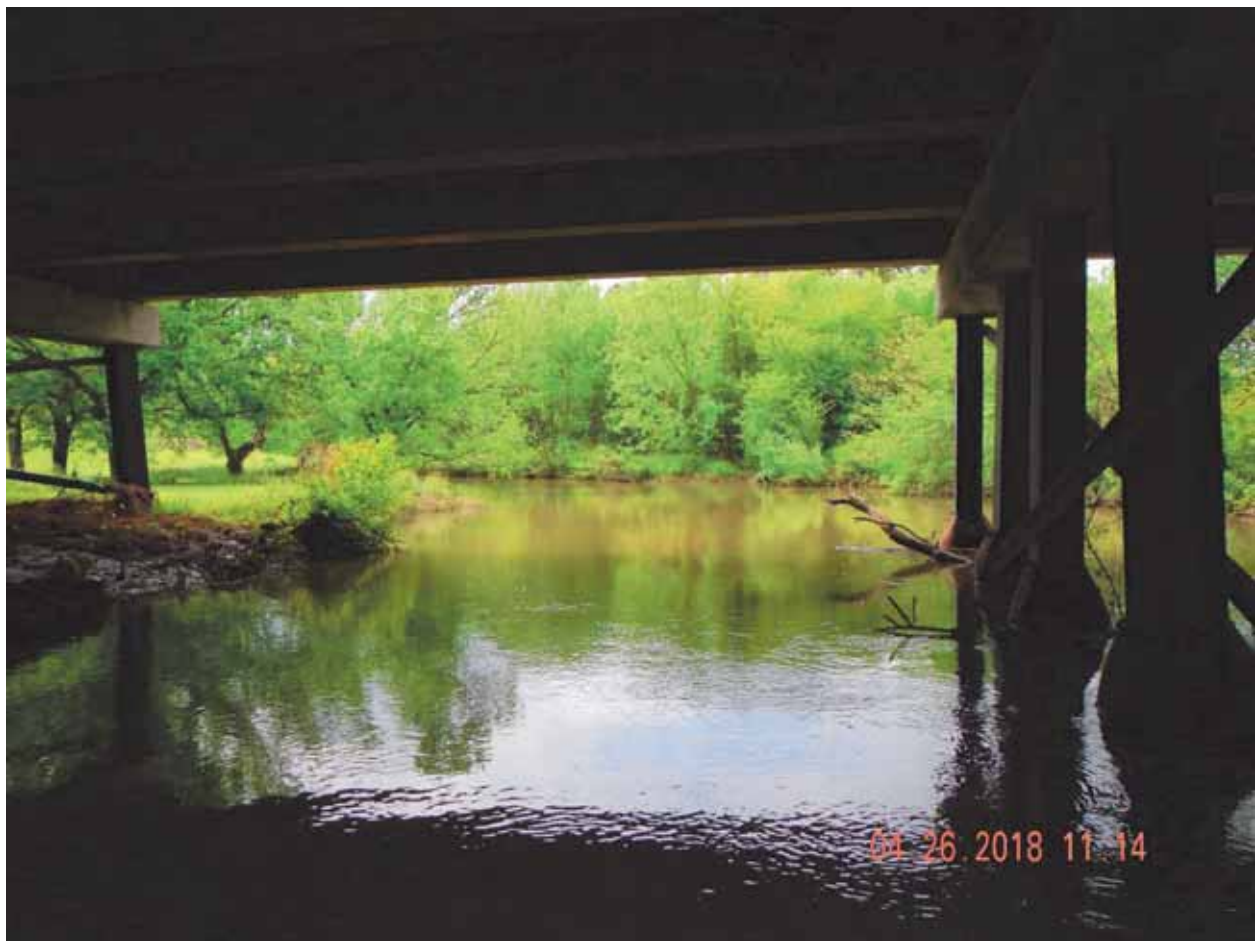


Figure 28:CT07 Downstream View



Figure 29: CT08 Upstream View



Figure 30: CT08 Downstream View



Figure 31: CT09 Upstream View

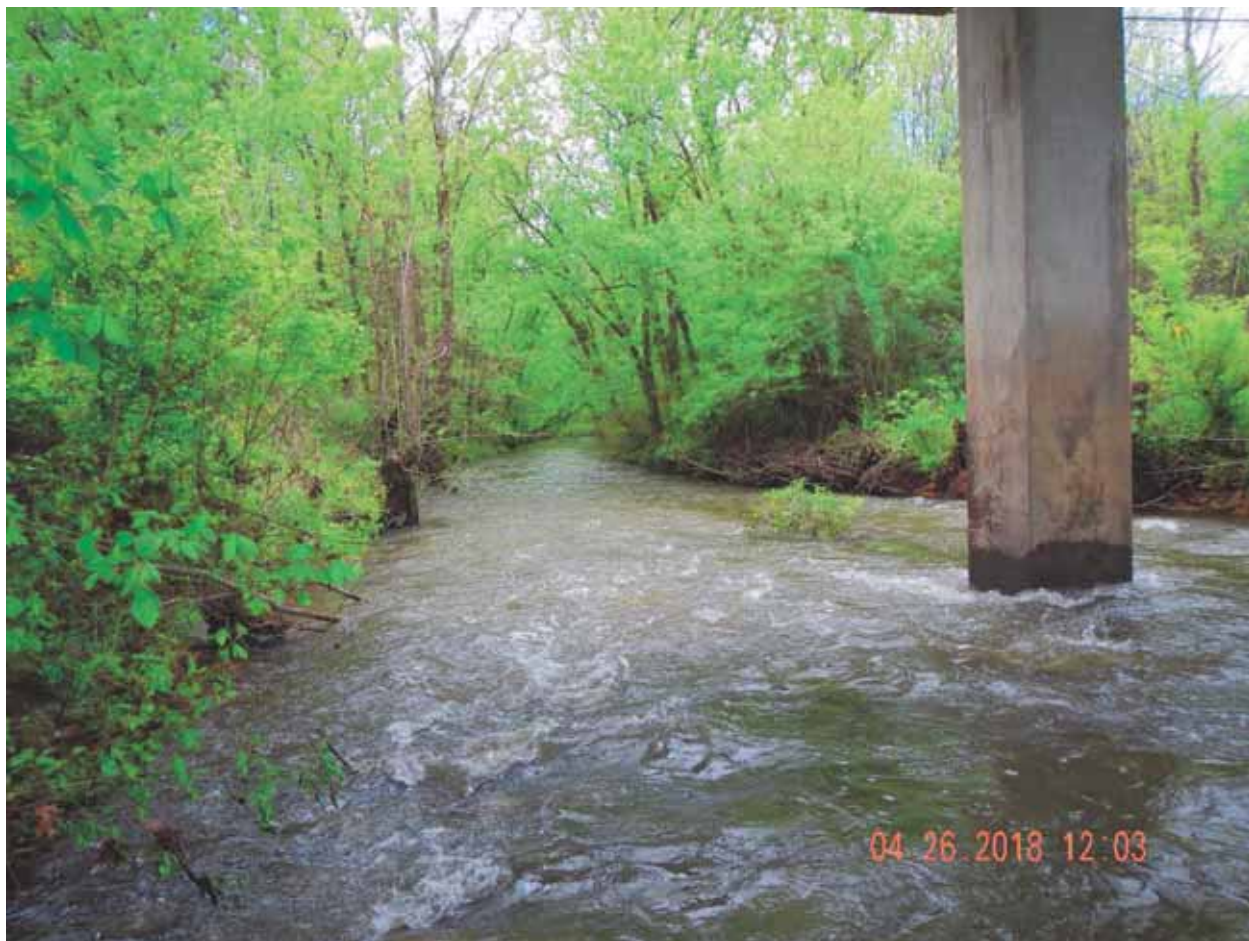


Figure 32: CT09 Downstream View



Figure 33: CT10 Upstream View



Figure 34: CT10 Downstream View



Figure 35: CR01 Upstream View



Figure 36: CR01 Downstream View

10.0 Full Lab Report



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

May 29, 2018

4SESD-ASB

MEMORANDUM

SUBJECT: FINAL Analytical Report
Project: 18-0142, Phase 1 PFASs Chattooga River
Surface Water Protection

FROM: Diana Burdette
OCS Analyst

THRU: Floyd Wellborn, Chief
ASB Organic Chemistry Section

TO: Derek Little

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and have been qualified by this laboratory if the applicable quality control criteria were not met. Verification is defined in Section 5.2 of the ASB LOQAM. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses Included in this report:

Method Used:

Accreditations:

Semi Volatile Organics (SVOA)

PFAS

ASB 100S (Water)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Sample Disposal Policy

Due to limited space for long term sample storage, ASB's policy is to dispose of samples on a periodic schedule. Air samples collected in summa canisters will be disposed of 30 days following the issuance of this report. All other sample media including original samples, sample extracts and or digestates will be disposed of, in accordance with applicable regulations, 60 days from the date of this report.

This sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time. If samples require storage beyond the 60-day period, please contact the Sample Control Coordinator by e-mail at R4SampleCustody@epa.gov.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

SAMPLES INCLUDED IN THIS REPORT

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
0418-FB1	E181703-01	Field Blank	4/24/18 15:10	4/26/18 8:45
0418-FB2	E181703-02	Field Blank Air	4/25/18 10:15	4/26/18 8:45
QA-TB	E181703-03	Trip Blank - Water	4/18/18 15:00	4/26/18 8:45
CI00-0418	E181703-04	Surface Water	4/24/18 15:15	4/26/18 8:45
CR01-0418	E181703-05	Surface Water	4/25/18 13:30	4/26/18 8:45
CR02-0418	E181703-06	Surface Water	4/24/18 13:20	4/26/18 8:45
CT01-0418	E181703-07	Surface Water	4/24/18 16:05	4/26/18 8:45
CT02-0418	E181703-08	Surface Water	4/24/18 16:30	4/26/18 8:45
CT03-0418	E181703-09	Surface Water	4/25/18 09:30	4/26/18 8:45
CT04-0418	E181703-10	Surface Water	4/25/18 09:55	4/26/18 8:45
CT05-0418	E181703-11	Surface Water	4/25/18 10:20	4/26/18 8:45
CT06-0418	E181703-12	Surface Water	4/25/18 10:45	4/26/18 8:45
CT07-0418	E181703-13	Surface Water	4/25/18 11:10	4/26/18 8:45
CT08-0418	E181703-14	Surface Water	4/25/18 11:30	4/26/18 8:45
CT09-0418	E181703-15	Surface Water	4/25/18 12:00	4/26/18 8:45
CT09-0418-D	E181703-16	Surface Water	4/25/18 12:05	4/26/18 8:45
CT10-0418	E181703-17	Surface Water	4/25/18 12:15	4/26/18 8:45
GI00-0418	E181703-18	Surface Water	4/24/18 12:40	4/26/18 8:45
OF01-0418	E181703-19	Surface Water	4/24/18 14:40	4/26/18 8:45
OF02-0418	E181703-20	Surface Water	4/24/18 14:15	4/26/18 8:45



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
H-6	Sample originally analyzed within holding time; some QC requirements not met. The reported result is from a second analysis performed for confirmation which occurred after the holding time expired.
J	The identification of the analyte is acceptable; the reported value is an estimate.
Q-2	Result greater than MDL but less than MRL.
QC-5	Calibration check standard less than method control limits.
QL-1	Laboratory Control Spike Recovery less than method control limits
QM-3	Matrix Spike Precision outside method control limits
QS-3	Surrogate recovery is lower than established control limits.

ACRONYMS AND ABBREVIATIONS

CAS	Chemical Abstracts Service Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
MDL	Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
MRL	Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
TIC	Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

ACCREDITATIONS:

ISO	ASB is accredited by ISO/IEC 17025, including an amplification for forensic accreditation through ANSI-ASQ National Accreditation Board. Refer to the certificate and scope of accreditation AT-1644 at: http://www.epa.gov/aboutepa/about-region-4s-science-and-ecosystem-support-division-sesd
NR	The EPA Region 4 Laboratory has not requested accreditation for this test.



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D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: 0418-FB1

Lab ID: E181703-01

Station ID:

Matrix: Field Blank

Date Collected: 4/24/18 15:10

Lab Number	Sample	Results Qualifiers	Units	APL	Prepared	Received	Analyst
757124-72-4	4-2FTS	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
27619-97-2	6-2FTS	160 U	ng/L	160	5/09/18 9:18	5/15/18 23:23	ASB 1005
39108-34-4	8-2FTS	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
754-91-6	FOSA	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
13252-13-6	H1PO-DA	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
2355-31-9	N-MeFOSAA	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
375-22-4	PFBA	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
375-73-5	PFBS	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
335-76-2	PFDA	80 U	ng/L	80	5/09/18 9:18	5/15/18 23:23	ASB 1005
307-55-1	PFDoA	40 U, J, H-6, QL-1	ng/L	40	5/09/18 9:18	5/25/18 4:33	ASB 1005
335-77-3	PFDS	160 U	ng/L	160	5/09/18 9:18	5/15/18 23:23	ASB 1005
375-85-9	PFHpA	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
375-92-8	PFHpS	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
307-24-4	PFHxA	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
355-46-4	PFHxS	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
375-95-1	PFNA	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
68259-12-1	PFNS	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
335-67-1	PFOA	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
1763-23-1	PFOS	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
2706-90-3	PFPeA	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
2706-91-4	PFPeS	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005
72629-94-8	PFTrDA	160 U, J, QC-5, H-6	ng/L	160	5/09/18 9:18	5/25/18 4:33	ASB 1005
2058-94-8	PFUdA	40 U	ng/L	40	5/09/18 9:18	5/15/18 23:23	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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D.A.R.T. Id: 18-0142
Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: 0418-FB2

Lab ID: E181703-02

Station ID:

Matrix: Field Blank Air

Date Collected: 4/25/18 10:15

Lab Number	Analyte	Result	Qualifier	Units	StdL	Prepared	Received	Method
757124-72-4	4-ETFS	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
27619-97-2	6-2FTS	160	U	ng/L	160	5/09/18 9:18	5/15/18 23:46	ASB 1005
39108-34-4	8-2FTS	41	U, J, QS-3	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
754-91-6	FOXA	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
13252-13-6	HFO-DA	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
2355-31-9	N-MeFOSAA	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
375-22-4	PFBA	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
375-73-5	PFBS	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
335-76-2	PFDA	82	U	ng/L	82	5/09/18 9:18	5/15/18 23:46	ASB 1005
307-55-1	PFDoA	41	U, J, H-6, QL-1	ng/L	41	5/09/18 9:18	5/25/18 4:55	ASB 1005
335-77-3	PFDS	160	U	ng/L	160	5/09/18 9:18	5/15/18 23:46	ASB 1005
375-85-9	PFHpA	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
375-92-8	PFHpS	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
307-24-4	PFHxA	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
355-46-4	PFHxS	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
375-95-1	PFNA	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
68259-12-1	PFNS	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
335-67-1	PFOA	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
1763-23-1	PFOS	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
2706-90-3	PFPeA	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
2706-91-4	PFPeS	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005
72629-94-8	PFTDA	160	U, J, H-6, QC-5	ng/L	160	5/09/18 9:18	5/25/18 4:55	ASB 1005
2058-94-8	PFUdA	41	U	ng/L	41	5/09/18 9:18	5/15/18 23:46	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 18-0142
Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: C100-0418

Lab ID: E181703-04

Station ID: C100

Matrix: Surface Water

Date Collected: 4/24/18 15:15

CLAS Number	Analyte	Result	Qualifier	Units	REL	Prepared	Revised	Method
757124-72-4	4-ETFS	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
27619-97-2	6-2FTS	160	U	ng/L	160	5/09/18 9:18	5/16/18 9:31	ASB 1005
39108-34-4	8-2FTS	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
754-91-6	FOXA	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
13252-13-6	HUPO-DA	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
2355-31-9	N-MeFOSAA	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
375-22-4	PFBA	18	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
375-73-3	PFBS	130		ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
335-76-2	PFDA	81	U	ng/L	81	5/09/18 9:18	5/16/18 9:31	ASB 1005
307-55-1	PFDoA	41	U, J, H-6, QL-1	ng/L	41	5/09/18 9:18	5/25/18 5:41	ASB 1005
335-77-3	PFDS	160	U	ng/L	160	5/09/18 9:18	5/16/18 9:31	ASB 1005
375-85-9	PFHpA	21	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
375-92-8	PFHpS	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
307-24-4	PFHxA	33	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
355-46-4	PFHxS	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
375-95-1	PFNA	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
68259-12-1	PFNS	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
335-67-1	PFOA	40	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
1763-23-1	PFOS	37	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
2706-90-3	PFPeA	71		ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
2706-91-4	PFPeS	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005
72629-94-8	PFTtDA	160	U, J, H-6, QC-5	ng/L	160	5/09/18 9:18	5/25/18 5:41	ASB 1005
2058-94-8	PFUdA	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:31	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 18-0142
Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CR01-0418

Lab ID: E181703-05

Station ID: CR01

Matrix: Surface Water

Date Collected: 4/25/18 13:30

CLAS Number	Analyte	Result	Qualifier	Units	REL	Prepared	Received	Method
757124-72-4	4-ETFS	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
27619-97-2	6-2FTS	160	U	ng/L	160	5/09/18 9:18	5/16/18 9:55	ASB 1005
39108-34-4	8-2FTS	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
754-91-6	FOXA	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
13252-13-6	HUPO-DA	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
2355-31-9	N-MeFOSAA	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
375-22-4	PFBA	25	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
375-73-5	PFBS	210		ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
335-76-2	PFDA	82	U	ng/L	82	5/09/18 9:18	5/16/18 9:55	ASB 1005
307-55-1	PFDoA	41	U, J, H-6, QL-1	ng/L	41	5/09/18 9:18	5/25/18 6:03	ASB 1005
335-77-3	PFDS	160	U	ng/L	160	5/09/18 9:18	5/16/18 9:55	ASB 1005
375-85-9	PFHpA	20	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
375-92-8	PFHpS	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
307-24-4	PFHxA	59		ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
355-46-4	PFHxS	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
375-95-1	PFNA	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
68259-12-1	PFNS	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
335-67-1	PFOA	61		ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
1763-23-1	PFOS	95		ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
2706-90-3	PFPeA	80		ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
2706-91-4	PFPeS	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005
72629-94-8	PFTDA	160	U, J, H-6, QC-5	ng/L	160	5/09/18 9:18	5/25/18 6:03	ASB 1005
2058-94-8	PFUdA	41	U	ng/L	41	5/09/18 9:18	5/16/18 9:55	ASB 1005



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D.A.R.T. Id: 18-0142
Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CR02-0418

Lab ID: E181703-06

Station ID: CR02

Matrix: Surface Water

Date Collected: 4/24/18 13:20

Lab Number	Analyte	Result	Qualifier	Unit	M/L	Prepared	Received	Method
757124-72-4	4-ETFS	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
27619-97-2	6-ETFS	150	U	ng/L	150	5/09/18 9:16	5/16/18 1:16	ASB 1005
39108-34-4	8-ETFS	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
754-91-6	FOXA	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
13252-13-6	HUPO-DA	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
2355-31-9	N-MeFOSAA	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
375-22-4	PFBA	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
375-73-5	PFBS	120		ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
335-76-2	PFDA	77	U	ng/L	77	5/09/18 9:16	5/16/18 1:16	ASB 1005
307-55-1	PFDoA	38	U, J, QL-1	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
335-77-3	PFDS	150	U	ng/L	150	5/09/18 9:16	5/16/18 1:16	ASB 1005
375-85-9	PFHpA	17	J, Q-2	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
375-92-8	PFHpS	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
307-24-4	PFHxA	47		ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
355-46-4	PFHxS	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
375-95-1	PFNA	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
68259-12-1	PFNS	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
335-67-1	PFOA	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
1763-23-1	PFOS	46		ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
2706-90-3	PFPeA	72		ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
2706-91-4	PFPeS	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005
72629-94-8	PFTrDA	150	U, J, QC-5	ng/L	150	5/09/18 9:16	5/16/18 1:16	ASB 1005
2058-94-8	PFUdA	38	U	ng/L	38	5/09/18 9:16	5/16/18 1:16	ASB 1005



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D.A.R.T. Id: 18-0142
Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CT01-0418

Lab ID: E181703-07

Station ID: CT01

Matrix: Surface Water

Date Collected: 4/24/18 16:05

Lab Number	Sample	Results Qualifiers	Units	APL	Proposed	Method	Method
757124-72-4	4-FTS	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
27619-97-2	6-FTS	150 U	ng/L	150	5/09/18 9/18	5/16/18 1/30	ASB 1005
39108-34-4	8-FTS	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
754-91-6	FOSA	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
13252-13-6	HFO-DA	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
2355-31-9	N-MeFOSAA	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
375-22-4	PEHA	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
375-73-5	PFBS	27 J, Q-2	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
335-76-2	PFDA	77 U	ng/L	77	5/09/18 9/18	5/16/18 1/30	ASB 1005
307-55-1	PFDoA	39 U, J, QL-1	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
335-77-3	PFDS	150 U	ng/L	150	5/09/18 9/18	5/16/18 1/30	ASB 1005
375-85-9	PFHpA	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
375-92-8	PFHpS	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
307-24-4	PFHxA	100	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
355-46-4	PFHxS	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
375-95-1	PFNA	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
68259-12-1	PENS	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
335-67-1	PFOA	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
1763-23-1	PFOS	20 J, Q-2	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
2706-90-3	PFPeA	130	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
2706-91-4	PFPeS	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005
72629-94-8	PFTrDA	150 U, J, QC-5	ng/L	150	5/09/18 9/18	5/16/18 1/30	ASB 1005
2058-94-8	PFUdA	39 U	ng/L	39	5/09/18 9/18	5/16/18 1/30	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CT02-0418

Lab ID: E181703-08

Station ID: CT02

Matrix: Surface Water

Date Collected: 4/24/18 16:30

Lab Number	Sample	Results Qualifiers	Units	APL	Prepared	Received	Method
757124-72-4	4-2FTS	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
27619-97-2	6-2FTS	160 U	ng/L	160	5/09/18 9:18	5/16/18 2:01	ASB 1005
39108-34-4	8-2FTS	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
754-91-6	FOSA	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
13252-13-6	H2PO-DA	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
2355-31-9	N-MeFOSAA	41 U, J, QS-3	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
375-22-4	PEHA	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
375-73-5	PFBS	23 J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
335-76-2	PFDA	81 U	ng/L	81	5/09/18 9:18	5/16/18 2:01	ASB 1005
307-55-1	PFDoA	41 U, J, H-6, QL-1	ng/L	41	5/09/18 9:18	5/25/18 8:28	ASB 1005
335-77-3	PFDS	160 U	ng/L	160	5/09/18 9:18	5/16/18 2:01	ASB 1005
375-85-9	PFHpA	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
375-92-8	PFHpS	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
307-24-4	PFHxA	68	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
355-46-4	PFHxS	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
375-95-1	PFNA	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
68259-12-1	PENS	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
335-67-1	PFOA	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
1763-23-1	PFOS	21 J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
2706-90-3	PFPeA	120	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
2706-91-4	PFPeS	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005
72629-94-8	PFTrDA	160 U, J, H-6, QC-5	ng/L	160	5/09/18 9:18	5/25/18 8:28	ASB 1005
2058-94-8	PFUdA	41 U	ng/L	41	5/09/18 9:18	5/16/18 2:01	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CT03-0418

Lab ID: E181703-09

Station ID: CT03

Matrix: Surface Water

Date Collected: 4/25/18 9:30

Lab Number	Sample	Results Qualifiers	Units	APL	Proposed	Method	Limit
757124-72-4	4-FTS	39 U	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
27619-97-2	6-FTS	160 U	ng/L	160	5/09/18 9:18	5/16/18 2:24	ASB 1005
39108-34-4	8-FTS	39 U	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
754-91-6	FOSA	39 U	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
13252-13-6	H1PO-DA	39 U	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
2355-31-9	N-MeFOSAA	39 U	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
375-22-4	PEHA	18 J, Q-2	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
375-73-5	PFBS	29 J, Q-2	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
335-76-2	PFDA	78 U	ng/L	78	5/09/18 9:18	5/16/18 2:24	ASB 1005
307-55-1	PFDoA	39 U, J, H-6, QL-1	ng/L	39	5/09/18 9:18	5/25/18 8:48	ASB 1005
335-77-3	PFDS	160 U	ng/L	160	5/09/18 9:18	5/16/18 2:24	ASB 1005
375-85-9	PFHpA	15 J, Q-2	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
375-92-8	PFHpS	39 U	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
307-24-4	PFHxA	91	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
355-46-4	PFHxS	39 U	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
375-95-1	PFNA	39 U	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
68259-12-1	PENS	39 U	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
335-67-1	PFOA	39 U	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
1763-23-1	PFOS	26 J, Q-2	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
2706-90-3	PFPeA	110	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
2706-91-4	PFPeS	39 U	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005
72629-94-8	PFTrDA	160 U, J, H-6, QC-5	ng/L	160	5/09/18 9:18	5/25/18 8:48	ASB 1005
2058-94-8	PFUdA	39 U	ng/L	39	5/09/18 9:18	5/16/18 2:24	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CT04-0418

Lab ID: E181703-10

Station ID: CT04

Matrix: Surface Water

Date Collected: 4/25/18 9:55

Number	Analyte	Result Qualifiers	Units	APL	Prepared	Received	Method
757124-72-4	4-FTS	38 U	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
27619-97-2	6-FTS	150 U	ng/L	150	5/09/18 9:18	5/16/18 2:46	ASB 1005
39108-34-4	8-FTS	38 U, J, QM-3	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
754-91-6	FOSA	38 U	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
13252-13-6	HiPO-DA	38 U	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
2355-31-9	N-MeFOSAA	38 U	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
375-22-4	PEHA	18 J, Q-2	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
375-73-5	PFBS	22 J, Q-2	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
335-76-2	PFDA	77 U	ng/L	77	5/09/18 9:18	5/16/18 2:46	ASB 1005
307-55-1	PFDoA	38 U, J, H-6, QL-1	ng/L	38	5/09/18 9:18	5/25/18 7:11	ASB 1005
335-77-3	PFDS	150 U	ng/L	150	5/09/18 9:18	5/16/18 2:46	ASB 1005
375-85-9	PFHpA	20 J, Q-2	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
375-92-8	PFHpS	38 U	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
307-24-4	PFHxA	66	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
355-46-4	PFHxS	38 U	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
375-95-1	PFNA	38 U	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
68259-12-1	PENS	38 U	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
335-67-1	PFOA	38 U	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
1763-23-1	PFOS	38 U	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
2706-90-3	PFPeA	160	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
2706-91-4	PFPeS	38 U	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005
72629-94-8	PFTrDA	150 U, J, H-6, QC-5, QM-3	ng/L	150	5/09/18 9:18	5/25/18 7:11	ASB 1005
2058-94-8	PFUdA	38 U	ng/L	38	5/09/18 9:18	5/16/18 2:46	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CT05-0418

Lab ID: E181703-11

Station ID: CT05

Matrix: Surface Water

Date Collected: 4/25/18 10:20

Lab Number	Sample	Results Qualifiers	Units	APL	Prepared	Received	Method
757124-72-4	4-2FTS	38 U	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
27619-97-2	6-2FTS	150 U	ng/L	150	5/09/18 9:18	5/16/18 3:00	ASB 1005
39108-34-4	8-2FTS	38 U	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
754-91-6	FOSA	38 U	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
13252-13-6	H1PO-DA	38 U	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
2355-31-9	N-MeFOSAA	38 U, J, QS-3	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
375-22-4	PEHA	20 J, Q-2	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
375-73-5	PFBS	22 J, Q-2	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
335-76-2	PFDA	76 U, J, QS-3	ng/L	76	5/09/18 9:18	5/16/18 3:00	ASB 1005
307-55-1	PFDoA	38 U, J, H-6, QL-1	ng/L	38	5/09/18 9:18	5/25/18 7:33	ASB 1005
335-77-3	PFDS	150 U	ng/L	150	5/09/18 9:18	5/16/18 3:00	ASB 1005
375-85-9	PFHpA	18 J, Q-2	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
375-92-8	PFHpS	38 U	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
307-24-4	PFHxA	78	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
355-46-4	PFHxS	38 U	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
375-95-1	PFNA	38 U	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
68259-12-1	PENS	38 U	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
335-67-1	PFOA	38 U	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
1763-23-1	PFOS	38 U	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
2706-90-3	PFPeA	170	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
2706-91-4	PFPeS	38 U	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005
72629-94-8	PFTriDA	150 U, J, H-6, QC-5	ng/L	150	5/09/18 9:18	5/25/18 7:33	ASB 1005
2058-94-8	PFUdA	38 U, J, QS-3	ng/L	38	5/09/18 9:18	5/16/18 3:00	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CT06-0418

Lab ID: E181703-12

Station ID: CT06

Matrix: Surface Water

Date Collected: 4/25/18 10:45

Lab Number	Analyte	Result	Qualifier	Units	REL	Prepared	Received	Method
757124-72-4	4-ETFS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
27619-97-2	6-ETFS	160	U	ng/L	160	5/09/18 9:18	5/16/18 3:31	ASB 1005
39108-34-4	8-ETFS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
754-91-6	FOXA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
13252-13-6	HUPO-DA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
2355-31-9	N-MeFOSAA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
375-22-4	PFBA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
375-73-5	PFBS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
335-76-2	PFDA	82	U, J, QS-3	ng/L	82	5/09/18 9:18	5/16/18 3:31	ASB 1005
307-55-1	PFDoA	41	U, J, H-6, QL-1	ng/L	41	5/09/18 9:18	5/25/18 7:56	ASB 1005
335-77-3	PFDS	160	U	ng/L	160	5/09/18 9:18	5/16/18 3:31	ASB 1005
375-85-9	PFHpA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
375-92-8	PFHpS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
307-24-4	PFHxA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
355-46-4	PFHxS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
375-95-1	PFNA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
68259-12-1	PFNS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
335-67-1	PFOA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
1763-23-1	PFOS	83		ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
2706-90-3	PFPeA	30	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
2706-91-4	PFPeS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005
72629-94-8	PFTtDA	160	U, J, H-6, QC-5	ng/L	160	5/09/18 9:18	5/25/18 7:56	ASB 1005
2058-94-8	PFUdA	41	U, J, QS-3	ng/L	41	5/09/18 9:18	5/16/18 3:31	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CT07-0418

Lab ID: E181703-13

Station ID: CT07

Matrix: Surface Water

Date Collected: 4/25/18 11:10

Lab Number	Analyte	Result	Qualifier	Units	REL	Prepared	Received	Method
757124-72-4	4-ETFS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
27619-97-2	6-2FTS	160	U	ng/L	160	5/09/18 9:18	5/16/18 3:54	ASB 1005
39108-34-4	8-2FTS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
754-91-6	FOSA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
13252-13-6	HUPO-DA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
2355-31-9	N-MeFOSAA	41	U, J, QS-3	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
375-22-4	PFBA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
375-73-3	PFBS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
335-76-2	PFDA	82	U	ng/L	82	5/09/18 9:18	5/16/18 3:54	ASB 1005
307-55-1	PFDoA	41	U, J, H-6, QL-1	ng/L	41	5/09/18 9:18	5/25/18 8:18	ASB 1005
335-77-3	PFDS	160	U	ng/L	160	5/09/18 9:18	5/16/18 3:54	ASB 1005
375-85-9	PFHpA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
375-92-8	PFHpS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
307-24-4	PFHxA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
355-46-4	PFHxS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
375-95-1	PFNA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
68259-12-1	PFNS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
335-67-1	PFOA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
1763-23-1	PFOS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
2706-90-3	PFPeA	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
2706-91-4	PFPeS	41	U	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005
72629-94-8	PFTDA	160	U, J, H-6, QC-5	ng/L	160	5/09/18 9:18	5/25/18 8:18	ASB 1005
2058-94-8	PFUdA	41	U, J, QS-3	ng/L	41	5/09/18 9:18	5/16/18 3:54	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CT08-0418

Lab ID: E181703-14

Station ID: CT08

Matrix: Surface Water

Date Collected: 4/25/18 11:30

CLAS Number	Analyte	Result	Qualifier	Units	REL	Prepared	Revised	Method
757124-72-4	4-ETFS	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
27619-97-2	6-ETFS	160	U	ng/L	160	5/09/18 9:16	5/16/18 4:16	ASB 1005
39108-34-4	8-ETFS	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
754-91-6	FOSA	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
13252-13-6	HUPO-DA	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
2355-31-9	N-MeFOSAA	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
375-22-4	PFBA	18	J, Q-2	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
375-73-3	PFBS	28	J, Q-2	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
335-76-2	PFDA	78	U	ng/L	78	5/09/18 9:16	5/16/18 4:16	ASB 1005
307-55-1	PFDoA	39	U, J, H-6, QL-1	ng/L	39	5/09/18 9:16	5/25/18 8:41	ASB 1005
335-77-3	PFDS	160	U	ng/L	160	5/09/18 9:16	5/16/18 4:16	ASB 1005
375-85-9	PFHpA	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
375-92-8	PFHpS	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
307-24-4	PFHxA	63		ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
355-46-4	PFHxS	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
375-95-1	PFNA	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
68259-12-1	PFNS	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
335-67-1	PFOA	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
1763-23-1	PFOS	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
2706-90-3	PFPeA	130		ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
2706-91-4	PFPeS	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005
72629-94-8	PFTtDA	160	U, J, QC-5, H-6	ng/L	160	5/09/18 9:16	5/25/18 8:41	ASB 1005
2058-94-8	PFUdA	39	U	ng/L	39	5/09/18 9:16	5/16/18 4:16	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CT09-0418

Lab ID: E181703-15

Station ID: CT09

Matrix: Surface Water

Date Collected: 4/25/18 12:00

Lab Number	Analyte	Result	Qualifier	Unit	REL	Prepared	Received	Method
757124-72-4	4-ETFS	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
27619-97-2	6-ETFS	150	U	ng/L	150	5/09/18 9:18	5/16/18 4:30	ASB 1005
39108-34-4	8-ETFS	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
754-91-6	FOXA	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
13252-13-6	HUPO-DA	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
2355-31-9	N-MeFOSAA	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
375-22-4	PFBA	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
375-73-3	PFBS	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
335-76-2	PFDA	77	U	ng/L	77	5/09/18 9:18	5/16/18 4:30	ASB 1005
307-55-1	PFDoA	39	U, J, H-6, QL-1	ng/L	39	5/09/18 9:18	5/25/18 9:03	ASB 1005
335-77-3	PFDS	150	U	ng/L	150	5/09/18 9:18	5/16/18 4:30	ASB 1005
375-85-9	PFHpA	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
375-92-8	PFHpS	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
307-24-4	PFHxA	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
355-46-4	PFHxS	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
375-95-1	PFNA	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
68259-12-1	PFNS	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
335-67-1	PFOA	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
1763-23-1	PFOS	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
2706-90-3	PFPeA	18	J, Q-2	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
2706-91-4	PFPeS	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005
72629-94-8	PFTtDA	150	U, J, H-6, QC-5	ng/L	150	5/09/18 9:18	5/25/18 9:03	ASB 1005
2058-94-8	PFUdA	39	U	ng/L	39	5/09/18 9:18	5/16/18 4:30	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CT09-0418-D

Lab ID: E181703-16

Station ID: CT09

Matrix: Surface Water

Date Collected: 4/25/18 12:05

Lab Number	Analyte	Result	Qualifier	Units	REL	Prepared	Received	Method
757124-72-4	4-ETFS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
27619-97-2	6-ETFS	160	U	ng/L	160	5/09/18 9:18	5/16/18 5:01	ASB 1005
39108-34-4	8-ETFS	39	U, J, QS-3	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
754-91-6	FOXA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
13252-13-6	HUPO-DA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
2355-31-9	N-MeFOSAA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
375-22-4	PFBA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
375-73-5	PFBS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
335-76-2	PFDA	78	U	ng/L	78	5/09/18 9:18	5/16/18 5:01	ASB 1005
307-55-1	PFDoA	39	U, J, H-6, QL-1	ng/L	39	5/09/18 9:18	5/25/18 9:28	ASB 1005
335-77-3	PFDS	160	U	ng/L	160	5/09/18 9:18	5/16/18 5:01	ASB 1005
375-85-9	PFHpA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
375-92-8	PFHpS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
307-24-4	PFHxA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
355-46-4	PFHxS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
375-95-1	PFNA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
68259-12-1	PFNS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
335-67-1	PFOA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
1763-23-1	PFOS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
2706-90-3	PFPeA	17	J, Q-2	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
2706-91-4	PFPeS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005
72629-94-8	PFTDA	160	U, J, H-6, QC-5	ng/L	160	5/09/18 9:18	5/25/18 9:28	ASB 1005
2058-94-8	PFUdA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:01	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CT10-0418

Lab ID: E181703-17

Station ID: CT10

Matrix: Surface Water

Date Collected: 4/25/18 12:15

Lab Number	Analyte	Result	Qualifier	Units	REL	Prepared	Received	Method
757124-72-4	4-ETFS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
27619-97-2	6-ETFS	160	U	ng/L	160	5/09/18 9:18	5/16/18 5:24	ASB 1005
39108-34-4	8-ETFS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
754-91-6	FOXA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
13252-13-6	HUPO-DA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
2355-31-9	N-MeFOSAA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
375-22-4	PFBA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
375-73-5	PFBS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
335-76-2	PFDA	78	U	ng/L	78	5/09/18 9:18	5/16/18 5:24	ASB 1005
307-55-1	PFDoA	39	U, J, QL-1, H-6	ng/L	39	5/09/18 9:18	5/25/18 9:49	ASB 1005
335-77-3	PFDS	160	U	ng/L	160	5/09/18 9:18	5/16/18 5:24	ASB 1005
375-85-9	PFHpA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
375-92-8	PFHpS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
307-24-4	PFHxA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
355-46-4	PFHxS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
375-95-1	PFNA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
68259-12-1	PFNS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
335-67-1	PFOA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
1763-23-1	PFOS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
2706-90-3	PFPeA	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
2706-91-4	PFPeS	39	U	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005
72629-94-8	PFTDA	160	U, J, H-6, QC-5	ng/L	160	5/09/18 9:18	5/25/18 9:49	ASB 1005
2058-94-8	PFUdA	39	U, J, QS-3	ng/L	39	5/09/18 9:18	5/16/18 5:24	ASB 1005



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Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: G100-0418

Lab ID: E181703-18

Station ID: G100

Matrix: Surface Water

Date Collected: 4/24/18 12:40

CLP Number	Analyte	Result	Qualifier	Units	REL	Prepared	Revised	Method
757124-72-4	4-ETFS	41	U	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
27619-97-2	6-ETFS	160	U	ng/L	160	5/09/18 9:18	5/16/18 5:47	ASB 1005
39108-34-4	8-ETFS	41	U, J, QS-3	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
754-91-6	FOXA	41	U	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
13252-13-6	HUPO-DA	41	U	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
2355-31-9	N-MeFOSAA	41	U	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
375-22-4	PFBA	19	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
375-73-3	PFBS	120		ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
335-76-2	PFDA	82	U	ng/L	82	5/09/18 9:18	5/16/18 5:47	ASB 1005
307-55-1	PFDoA	41	U, J, H-6, QL-1	ng/L	41	5/09/18 9:18	5/25/18 10:11	ASB 1005
335-77-3	PFDS	160	U	ng/L	160	5/09/18 9:18	5/16/18 5:47	ASB 1005
375-85-9	PFHpA	16	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
375-92-8	PFHpS	41	U	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
307-24-4	PFHxA	51		ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
355-46-4	PFHxS	41	U	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
375-95-1	PFNA	41	U	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
68259-12-1	PFNS	41	U	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
335-67-1	PFOA	32	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
1763-23-1	PFOS	32	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
2706-90-3	PFPeA	68		ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
2706-91-4	PFPeS	41	U	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005
72629-94-8	PFTDA	160	U, J, H-6, QC-5	ng/L	160	5/09/18 9:18	5/25/18 10:11	ASB 1005
2058-94-8	PFUdA	41	U, J, QS-3	ng/L	41	5/09/18 9:18	5/16/18 5:47	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: QF01-0418

Lab ID: E181703-19

Station ID: QF01

Matrix: Surface Water

Date Collected: 4/24/18 14:40

USEPA Number	Analyte	Result	Qualifier	Units	REL	Prepared	Method	Method
757124-72-4	4-ETFS	41	U	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
27619-97-2	6-2FTS	160	U	ng/L	160	5/09/18 9:18	5/16/18 8:00	ASB 1005
39108-34-4	8-2FTS	41	U	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
754-91-6	FOXA	41	U	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
13252-13-6	HUPO-DA	41	U	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
2355-31-9	N-MeFOSAA	41	U	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
375-22-4	PFBA	41	U	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
375-73-3	PFBS	110		ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
335-76-2	PFDA	82	U, J, QS-3	ng/L	82	5/09/18 9:18	5/16/18 8:00	ASB 1005
307-55-1	PFDoA	41	U, J, H-6, QL-1	ng/L	41	5/09/18 9:18	5/25/18 10:34	ASB 1005
335-77-3	PFDS	160	U	ng/L	160	5/09/18 9:18	5/16/18 8:00	ASB 1005
375-85-9	PFHpA	19	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
375-92-8	PFHpS	41	U	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
307-24-4	PFHxA	42		ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
355-46-4	PFHxS	41	U	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
375-95-1	PFNA	41	U	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
68259-12-1	PFNS	41	U	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
335-67-1	PFOA	38	J, Q-2	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
1763-23-1	PFOS	55		ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
2706-90-3	PFPeA	70		ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
2706-91-4	PFPeS	41	U	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005
72629-94-8	PFTDA	160	U, J, H-6, QC-5	ng/L	160	5/09/18 9:18	5/25/18 10:34	ASB 1005
2058-94-8	PFUdA	41	U, J, QS-3	ng/L	41	5/09/18 9:18	5/16/18 8:00	ASB 1005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: OF02-0418

Lab ID: E181703-20

Station ID: OF02

Matrix: Surface Water

Date Collected: 4/24/18 14:15

Lab Number	Sample	Result Qualifiers	Units	APL	Prepared	Received	Analyst
757124-72-4	4-2FTS	42 U	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
27619-97-2	6-2FTS	170 U	ng/L	170	5/09/18 9:18	5/16/18 8:32	ASB 1005
39108-34-4	8-2FTS	42 U	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
754-91-6	FOSA	42 U	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
13252-13-6	HiPO-DA	42 U	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
2355-31-9	N-MeFOSAA	42 U, J, QS-3	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
375-22-4	PEHA	20 J, Q-2	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
375-73-5	PFBS	120	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
335-76-2	PFDA	43 J, Q-2, QS-3	ng/L	83	5/09/18 9:18	5/16/18 8:32	ASB 1005
307-55-1	PFDoA	42 U, J, QL-1, H-6	ng/L	42	5/09/18 9:18	5/25/18 10:56	ASB 1005
335-77-3	PFDS	170 U	ng/L	170	5/09/18 9:18	5/16/18 8:32	ASB 1005
375-85-9	PFHpA	20 J, Q-2	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
375-92-8	PFHpS	42 U	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
307-24-4	PFHxA	47	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
355-46-4	PFHxS	42 U	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
375-95-1	PFNA	42 U	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
68259-12-1	PFNS	42 U	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
335-67-1	PFOA	35 J, Q-2	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
1763-23-1	PFOS	73	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
2706-90-3	PFPeA	75	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
2706-91-4	PFPeS	42 U	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005
72629-94-8	PFTrDA	170 U, J, H-6, QC-5	ng/L	170	5/09/18 9:18	5/25/18 10:56	ASB 1005
2058-94-8	PFUdA	42 U, J, QS-3	ng/L	42	5/09/18 9:18	5/16/18 8:32	ASB 1005



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D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics (SVOA) - Quality Control

US-EPA, Region 4, SEDS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Notes
Batch 1805038 - S PFC										
Blank (1805038-BLK1)				Prepared & Analyzed: 05/15/18						
ASB 100S										
4-2FTS	U	40	ng/L							
6-2FTS	U	160	*							
8-2FTS	U	40	*							
FOSA	U	40	*							
HFPO-DA	U	40	*							
N-MeFOHAA	U	40	*							
PFBA	U	40	*							
PFBS	U	40	*							
PFDA	U	80	*							
PFDoA	U	40	*							QC-1, QC-5, QL-1, QS-3, U
PFDS	U	160	*							
PFHpA	U	40	*							
PFHpS	U	40	*							
PFHxA	U	40	*							
PFHxS	U	40	*							
PFNA	U	40	*							
PFNS	U	40	*							
PFOA	U	40	*							
PFOS	U	40	*							
PFPeA	U	40	*							
PFPeS	U	40	*							
PFTrDA	U	160	*							QC-1, QC-5, U
PFUdA	U	40	*							
Blank (1805038-BLK2)				Prepared & Analyzed: 05/15/18						
ASB 100S										
4-2FTS	U	40	ng/L							
6-2FTS	U	160	*							
8-2FTS	U	40	*							
FOSA	U	40	*							
HFPO-DA	U	40	*							
N-MeFOHAA	U	40	*							
PFBA	U	40	*							
PFBS	U	40	*							
PFDA	U	80	*							



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 18-0142
Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics (SVOA) - Quality Control
US-EPA, Region 4, SED

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1805038 - S PFC										
Blank (1805038-BLK2)										
Prepared & Analyzed: 05/15/18										
PFDoA	U	40	ng/L							QC-1, QC-5, QL-1, U
PFDS	U	160	"							U
PFHpA	U	40	"							U
PFHpS	U	40	"							U
PFHxA	U	40	"							U
PFHxS	U	40	"							U
PFNA	U	40	"							U
PFNS	U	40	"							U
PFOA	U	40	"							U
PFOS	U	40	"							U
PFPeA	U	40	"							U
PFPeS	U	40	"							U
PFTDA	U	160	"							QC-1, QC-5, U
PFUdA	U	40	"							U
LCS (1805038-B81)										
Prepared & Analyzed: 05/15/18										
ASB 100S										
4-2FTS	349	40	ng/L	372.51		93.8	70-130			
6-2FTS	304	160	"	378.49		80.2	70-130			
8-2FTS	432	40	"	382.47		113	70-130			
FOSA	388	40	"	308.41		97.3	70-130			
HFPO-DA	401	40	"	308.41		101	70-130			
N-MeFOSAA	395	40	"	308.41		99.0	70-130			
PFBA	361	40	"	308.41		90.7	70-130			
PFBS	330	40	"	352.59		93.7	70-130			
PFDA	343	80	"	308.41		86.2	70-130			
PFDoA	188	40	"	308.41		47.3	70-130			QC-1, QC-5, QL-1
PFDS	499	160	"	384.46		130	70-130			QC-2
PFHpA	358	40	"	308.41		89.8	70-130			
PFHpS	390	40	"	378.49		103	70-130			
PFHxA	341	40	"	308.41		85.6	70-130			
PFHxS	333	40	"	363.35		91.6	70-130			
PFNA	336	40	"	308.41		84.2	70-130			
PFNS	343	40	"	382.47		90.6	70-130			
PFOA	378	40	"	308.41		94.9	70-130			
PFOS	348	40	"	368.73		94.3	70-130			



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Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics (SVOA) - Quality Control

US-EPA, Region 4, SEDS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1805038 - S PFC										
LCS (1805038-BS1)										
Prepared & Analyzed: 05/15/18										
PFPeA	360	40	ng/L	398.41		90.4	70-130			
PFPeS	355	40	"	374.50		94.4	70-130			
PFTrDA	433	160	"	398.41		109	70-130			QC-1, QC-5
PFUDA	403	40	"	398.41		101	70-130			
Matrix Spike (1805038-MS1)										
Source: E181703-10 Prepared: 05/09/18 Analyzed: 05/25/18										
ASB 100S										
4-2FTS	323	39	ng/L	346.94	U	93.1	70-130			
6-2FTS	324	39	"	352.50	U	92.0	70-130			
8-2FTS	304	39	"	356.22	U	85.2	70-130			QM-3
FOSA	309	39	"	371.06	U	83.3	70-130			
HFPO-DA	356	39	"	371.06	U	95.9	70-130			
N-MeFOSAA	377	9.6	"	371.06	U	102	70-130			
PFBA	367	39	"	371.06	18.2	94.0	70-130			
PFBS	299	39	"	328.39	U	91.2	70-130			
PFDA	377	39	"	371.06	U	102	70-130			
PFDoA	357	39	"	371.06	U	96.3	70-130			
PFDS	293	39	"	358.07	U	81.7	70-130			
PFHpA	373	39	"	371.06	20.3	94.9	70-130			
PFHpS	331	39	"	352.50	U	94.0	70-130			
PFHxA	405	39	"	371.06	65.7	91.4	70-130			
PFHxS	318	39	"	338.40	U	94.1	70-130			
PFNA	308	39	"	371.06	U	82.9	70-130			
PFNS	283	39	"	356.22	U	79.5	70-130			
PFOA	355	39	"	371.06	U	95.7	70-130			
PFOS	312	39	"	343.41	U	90.9	70-130			
PFPeA	520	39	"	371.06	155	98.3	70-130			
PFPeS	342	9.6	"	348.79	U	98.2	70-130			
PFTrDA	282	39	"	371.06	U	76.1	70-130			QC-5, QM-3
PFUDA	325	39	"	371.06	U	87.7	70-130			



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D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics (SVOA) - Quality Control

US-EPA, Region 4, SEDS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1805038 - S PFC

Matrix Spike Dup (1805038-MSD1)

Source: E181703-10

Prepared: 05/09/18 Analyzed: 05/25/18

ASB 100S

4-2FTS	316	39	ng/L	353.50	U	89.3	70-130	2.31	20	
6-2FTS	367	39	*	359.17	U	102	70-130	12.5	20	
8-2FTS	376	39	*	362.95	U	103	70-130	21.2	20	QM-3
FOSA	365	39	*	378.07	U	96.6	70-130	16.6	20	
HFPO-DA	361	39	*	378.07	U	95.5	70-130	1.45	20	
N-MeFOBAA	391	9.7	*	378.07	U	103	70-130	3.54	20	
PFBA	368	39	*	378.07	18.2	92.4	70-130	0.162	20	
PFBS	341	39	*	334.59	U	102	70-130	13.0	20	
PFDA	411	39	*	378.07	U	109	70-130	8.67	20	
PFDA	370	39	*	378.07	U	97.7	70-130	3.38	20	
PFDS	269	39	*	364.84	U	73.7	70-130	8.49	20	
PFHpA	395	39	*	378.07	20.3	99.2	70-130	5.88	20	
PFHpS	341	39	*	359.17	U	95.0	70-130	2.92	20	
PFHxA	433	39	*	378.07	65.7	97.0	70-130	6.62	20	
PFHxS	329	39	*	344.80	U	95.3	70-130	3.13	20	
PFNA	339	39	*	378.07	U	89.7	70-130	9.71	20	
PFNS	336	39	*	362.95	U	92.7	70-130	17.1	20	
PFQA	385	39	*	378.07	U	102	70-130	7.95	20	
PFOS	351	39	*	349.91	U	100	70-130	11.8	20	
PFPeA	516	39	*	378.07	155	95.5	70-130	0.705	20	
PFPeS	338	9.7	*	355.39	U	95.2	70-130	1.18	20	
PFTDA	418	39	*	378.07	U	111	70-130	38.8	20	QC-5, QM-3
PFUdA	378	39	*	378.07	U	100	70-130	15.0	20	

MRL Verification (1805038-PS1)

Prepared & Analyzed: 05/15/18

ASB 100S

4-2FTS	20.9	40	ng/L	37.251		56.1	50-150			1, MRL-2, Q-2
8-2FTS	45.5	40	*	38.247		119	50-150			MRL-2
FOSA	30.1	40	*	39.841		75.6	50-150			1, MRL-2, Q-2
HFPO-DA	46.1	40	*	39.841		116	50-150			MRL-2
N-MeFOBAA	32.7	40	*	39.841		82.0	50-150			1, MRL-2, Q-2
PFBA	34.2	40	*	39.841		85.9	50-150			1, MRL-2, Q-2



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 D.A.R.T. Id: 18-0142
 Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Semi Volatile Organics (SVOA) - Quality Control
US-EPA, Region 4, SED

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1805038 - S PFC										
MRL Verification (1805038-PS1)				Prepared & Analyzed: 05/15/18						
PFBs	36.6	40	ng/L	35.259		104	50-150			I, MRL-2, Q-2
PFDA	47.4	80	*	39.841		119	50-150			I, MRL-2, Q-2
PFDoA	44.4	40	*	39.841		111	50-150			MRL-2, QC-1, QC-5
PFHpA	39.9	40	*	39.841		100	50-150			I, MRL-2, Q-2
PFHpS	41.1	40	*	37.849		109	50-150			MRL-2
PFHxA	46.8	40	*	39.841		117	50-150			MRL-2
PFHxS	35.2	40	*	36.335		96.7	50-150			I, MRL-2, Q-2
PFNA	40.2	40	*	39.841		101	50-150			MRL-2
PFNS	32.7	40	*	38.247		85.6	50-150			I, MRL-2, Q-2
PFDA	40.4	40	*	39.841		101	50-150			MRL-2
PFOS	27.3	40	*	36.873		74.1	50-150			I, MRL-2, Q-2
PFPeA	39.1	40	*	39.841		98.1	50-150			I, MRL-2, Q-2
PFPeS	27.7	40	*	37.450		74.1	50-150			I, MRL-2, Q-2
PFUdA	42.0	40	*	39.841		105	50-150			MRL-2, Q-2
MRL Verification (1805038-PS2)				Prepared & Analyzed: 05/15/18						
ASB 100S										
6:2FTS	116	160	ng/L	151.39		76.5	50-150			I, MRL-2, Q-2
PFDS	84.4	160	*	153.78		54.9	50-150			I, MRL-2, Q-2, QC-2
PFtDA	163	160	*	159.36		102	50-150			MRL-2, QC-1, QC-5



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D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit.
J	The identification of the analyte is acceptable; the reported value is an estimate.
MRL-2	MRL verification for Non-Potable Water matrix
Q-2	Result greater than MDL but less than MRL.
QC-1	Analyte concentration low in continuing calibration verification standard
QC-2	Analyte concentration high in continuing calibration verification standard
QC-5	Calibration check standard less than method control limits.
QL-1	Laboratory Control Spike Recovery less than method control limits
QM-3	Matrix Spike Precision outside method control limits
QS-3	Surrogate recovery is lower than established control limits.

11.0 Field Logbook

Initial and Date: _____

United States Environmental Protection Agency
Region 4
Science and Ecosystem Support Division
980 College Station Road
Athens, Georgia 30605-2720



Project Name: Study of PFASs Compounds on the Chattooga River
Project Location: Chattooga County GA, Cherokee and Etowah County AL
Project ID: 18-0142
Project Leader: Derek Little

Sampling

Book 1 of 1
Inclusive Dates: 4/24/18 - 4/24/18

List of personnel:

Name	Initials	Duties	Organization
DEREK LITTLE	<i>DL</i>	PROJECT LEADER	SESD
JERRY ACKERMAN	<i>J Ack</i>	SAMPLER	SESD
NATE BARLET	<i>NTB</i>	SAMPLER	SESD

Initial and Date: DL 4/29/18

Initial and Date: DE 4/24/18

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18-0142

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Initial and Date:

DL 4/24/18

Standard Operating Procedures to be used, unless otherwise stated.

Field Measurement Procedures	SESDPROC-	Revision
Field pH Measurement	100	R4
Field Specific Conductance Measurement	101	R6
Field Temperature Measurement	102	R5
Field Turbidity Measurement	103	R4
Field Measurement of Dissolved Oxygen	106	R4
Global Positioning System	110	R4
In-Situ Water Quality Monitoring	111	R3
Field Sampling Procedures	SESDPROC-	Revision
Surface Water Sampling	201	R4
Ecology Section Field Sampling Procedures	SESDPROC-	Revision
Hydrological Studies	501	R4
Divisional Quality Systems Documents	SESDPROC-	Revision
Logbooks	1002	R0
Quality System Procedures	SESDPROC-	Revision
Sample and Evidence Management	005	R3
Field Sampling Quality Control	011	R5

Field Equipment Used:

Equipment Description	Identification Number
1. SmartTrac	549609
2. LaMotte	3489-3102
3. GPS- 400t	5156769
4. Nikon Cool Pix	549549
5.	
6.	
7.	

Station information:

Station ID	Description	State	Longitude	Latitude
CI00	Weiss Lake	AL		
CR01	Coosa Sample	GA		
CR02	NEE-13, Coosa River	AL		
CT01	Canyon Road	AL		
CT02	Cherokee County 97	AL		
CT03	Holland/Chattoogaville	GA		
CT04	Lyerly Dam	GA		
CT05	USGS Station, GA-1	GA		
CT06	Martha Berry	GA		
CT07	Club Drive	GA		
CT08	Tate Rd	GA		
CT09	Shattuck Blvd	GA		
CT10	Villanow ST	GA		
GI00	Gadsden	AL		
OF01	Outfall 1	AL		
OF02	Power Outfall	AL		

18-0142

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Initial and Date:

DL 4/24/18

Station ID:	GIØØ
Sample Date:	4-24-18
Sample Time:	1240

Sampling

Clean hands:	JWA
Dirty hands:	DML
# Containers:	2

GPS

Latitude:	
Longitude:	
Operator:	DML ± 18ft

Flow

Total Q:	NA
Operator:	NA

In Situ WQ

Operator:	NTB
DO (mg/L):	8.60
pH:	6.97
Temperature (C):	17.7
Sp. Cond. (µS/cm):	151
Turbidity (NTU):	10

Photo Log

Photographer:	DML
Upstream Photo:	1163
Downstream Photo:	1164

Notes/Observations/Drawings:

ADEN collection w/ Van Dorn sampler to level of intake
EPA Sampled from bank
All times EST

Initial and Date: 4-24-18 DL

Station ID:	CK02
Sample Date:	4-24-18
Sample Time:	1320

Sampling

Clean hands:	DNL
Dirty hands:	NTB
# Containers:	2

GPS

Latitude:	
Longitude:	
Operator:	

Flow

Total Q:	NA
Operator:	NA

In Situ WQ

Operator:	NTB
DO (mg/L):	8.91
pH:	7.67
Temperature (C):	17.54
Sp. Cond. (µS/cm):	149.5
Turbidity (NTU):	13

Photo Log

Photographer:	DL
Upstream Photo:	1165
Downstream Photo:	1164

Notes/Observations/Drawings:

Sampled from ADEN Bant

Initial and Date:

DL 4-24-18

Station ID:	OFO2
Sample Date:	4-24-18
Sample Time:	1415

Sampling

Clean hands:	DML
Dirty hands:	NTB
# Containers:	2

GPS

Latitude:	
Longitude:	
Operator:	DML

Flow

Total Q:	NA
Operator:	NA

In Situ WQ

Operator:	JWA
DO (mg/L):	8.95
pH:	7.86
Temperature (C):	17.76
Sp. Cond. (μS/cm):	151
Turbidity (NTU):	11

Photo Log

Photographer:	DL
Upstream Photo:	1167
Downstream Photo:	1168

Notes/Observations/Drawings:

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Initial and Date: DL 4-24-10

Station ID:	DF01
Sample Date:	4-24-10
Sample Time:	1440

Sampling

Clean hands:	DML
Dirty hands:	NTB
# Containers:	2

GPS

Latitude:	
Longitude:	
Operator:	

Flow

Total Q:	NA
Operator:	NA

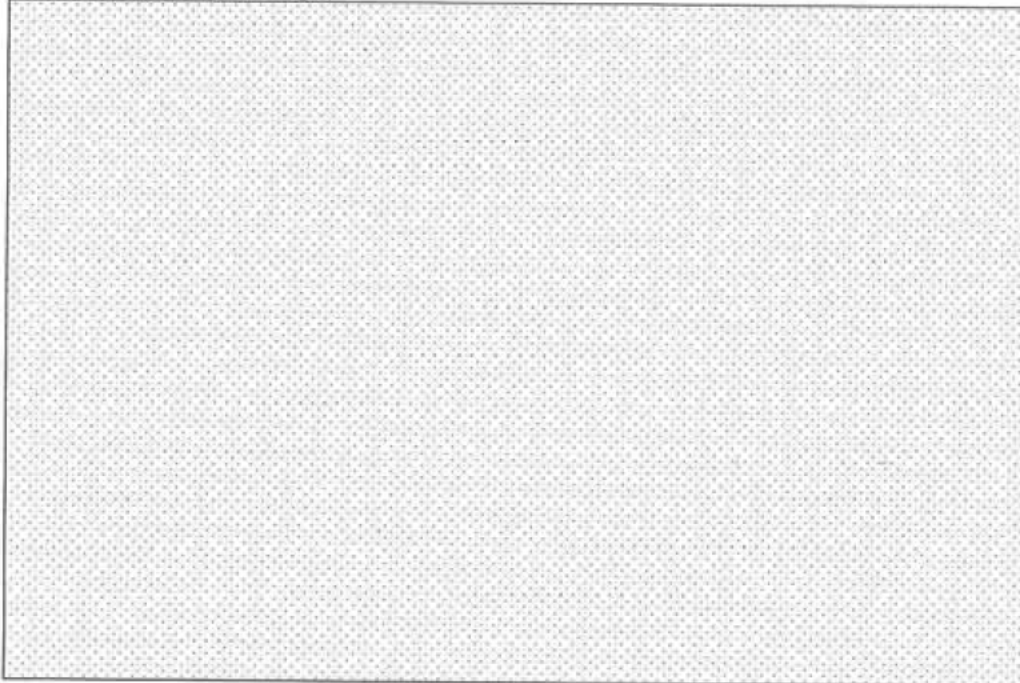
In Situ WQ

Operator:	JWA
DO (mg/L):	9.76
pH:	8.03
Temperature (C):	18.5
Sp. Cond. (μS/cm):	152
Turbidity (NTU):	19

Photo Log

Photographer:	DML
Upstream Photo:	1169
Downstream Photo:	1170

Notes/Observations/Drawings:



18-0142

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Initial and Date: DL 4-24-18

Station ID:	C100
Sample Date:	4/24/18
Sample Time:	1515

Sampling

Clean hands:	DL
Dirty hands:	NTB
# Containers:	2

GPS

Latitude:	
Longitude:	
Operator:	DL

Flow

Total Q:	NA
Operator:	

In Situ WQ

Operator:	JWA
DO (mg/L):	9.56
pH:	8.14
Temperature (C):	16.23
Sp. Cond. (µS/cm):	155
Turbidity (NTU):	7.8

Photo Log

Photographer:	DL
Upstream Photo:	Lake: 1171
Downstream Photo:	NA

Notes/Observations/Drawings:

0418-FBI collected @1510

Initial and Date: 4-24-18

Station ID:	GT01
Sample Date:	4-24-18
Sample Time:	1605

Sampling

Clean hands:	NTS
Dirty hands:	JWA
# Containers:	2

GPS

Latitude:	
Longitude:	
Operator:	

Flow

Total Q:	NA
Operator:	NA

In Situ WQ

Operator:	JWA
DO (mg/L):	8.62
pH:	7.95
Temperature (C):	15.8
Sp. Cond. (µS/cm):	132
Turbidity (NTU):	58.1

Photo Log

Photographer:	JWA
Upstream Photo:	1172
Downstream Photo:	1173

Notes/Observations/Drawings:

Stage too high for flow measurements

Initial and Date: DL 4-24-18

Station ID:	CT02
Sample Date:	4-24-18
Sample Time:	1630

Sampling

Clean hands:	SWA
Dirty hands:	NTB
# Containers:	2

GPS

Latitude:	
Longitude:	
Operator:	NTB

Flow

Total Q:	NA
Operator:	NA

In Situ WQ

Operator:	DL
DO (mg/L):	8.97
pH:	7.84
Temperature (C):	15.57
Sp. Cond. (μS/cm):	124.5
Turbidity (NTU):	70.1

Photo Log

Photographer:	NTB
Upstream Photo:	1174
Downstream Photo:	1175

Notes/Observations/Drawings:

Flow too high to wade

Initial and Date: 4/25/18 DL

Station ID:	CT03
Sample Date:	4-25-18
Sample Time:	0930

Sampling

Clean hands:	JWA
Dirty hands:	NTB
# Containers:	2

GPS

Latitude:	
Longitude:	
Operator:	NTB

Flow

Total Q:	NA
Operator:	NA

In Situ WQ

Operator:	JWA
DO (mg/L):	8.59
pH:	7.7
Temperature (C):	15.7
Sp. Cond. (µS/cm):	141
Turbidity (NTU):	36

Photo Log

Photographer:	NTB
Upstream Photo:	1174
Downstream Photo:	1178 DL

1177 4-25-18

Notes/Observations/Drawings:

Flow too high to measure safely

GA ERD observing / [REDACTED]

Canoe launch

- Runners possibly TREX material
- Possible source unknown?

Initial and Date: DL 4-25-18

Station ID:	CT04
Sample Date:	4-25-18
Sample Time:	0955

Sampling

Clean hands:	NTB
Dirty hands:	JWA
# Containers:	4

GPS

Latitude:	
Longitude:	
Operator:	NTB

Flow

Total Q:	NA
Operator:	NA

In Situ WQ

Operator:	DL
DO (mg/L):	9.01
pH:	7.82
Temperature (C):	15.61
Sp. Cond. (µS/cm):	149.4
Turbidity (NTU):	27

Photo Log

Photographer:	NTB
Upstream Photo:	1178
Downstream Photo:	1179

Notes/Observations/Drawings:

Flow too high to measure.

Canoe Launch @ site also, same material as CT03

Initial and Date: DL 4-25-18

Station ID:	CT05
Sample Date:	4-25-18
Sample Time:	1020
Sampling	
Clean hands:	NTB
Dirty hands:	JWA
# Containers:	2
GPS	
Latitude:	
Longitude:	
Operator:	NTB
Flow	
Total Q:	NA
Operator:	NA

In Situ WQ

Operator:	JWA
DO (mg/L):	9.36
pH:	7.80
Temperature (C):	15.48
Sp. Cond. (µS/cm):	151.0
Turbidity (NTU):	22

Photo Log

Photographer:	NTB
Upstream Photo:	1180
Downstream Photo:	1181

Notes/Observations/Drawings:

04/26 F02 @ 1015
Flow too High, GS gauge

Initial and Date: DL 4/25/18

Station ID:	CT06
Sample Date:	4-25-16/18 4/25/18
Sample Time:	1045

Sampling	
Clean hands:	NTB
Dirty hands:	JWA
# Containers:	2

GPS	
Latitude:	
Longitude:	
Operator:	NTB

Flow	
Total Q:	N/A
Operator:	N/A

In Situ WQ

Operator:	DHL
DO (mg/L):	8.77
pH:	7.85
Temperature (C):	15.30
Sp. Cond. (µS/cm):	183
Turbidity (NTU):	15

Photo Log

Photographer:	1182
Upstream Photo:	1183
Downstream Photo:	NTB

Notes/Observations/Drawings:



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Initial and Date:

DL 4/25/18

Station ID:	CT07
Sample Date:	4-25-18
Sample Time:	1110
Sampling	
Clean hands:	NTB
Dirty hands:	JWA
# Containers:	2
GPS	
Latitude:	
Longitude:	
Operator:	NTB
Flow	
Total Q:	NA
Operator:	NA

In Situ WQ

Operator:	JML
DO (mg/L):	9.24
pH:	8.07
Temperature (C):	15.07
Sp. Cond. (μS/cm):	115.2
Turbidity (NTU):	15

Photo Log

Photographer:	NTB
Upstream Photo:	1185
Downstream Photo:	1186

Notes/Observations/Drawings:

Stage too high for flow

N 34, 560 87

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Initial and Date: 4/25/18 JCL

Station ID:	CT08
Sample Date:	4-25-18
Sample Time:	1/36

Sampling

Clean hands:	NTB
Dirty hands:	JWA
# Containers:	2

GPS

Latitude:	
Longitude:	
Operator:	NTB

Flow

Total Q:	NA
Operator:	NA

In Situ WQ

Operator:	JML
DO (mg/L):	9.07
pH:	8.16
Temperature (C):	15.30
Sp. Cond. (μS/cm):	126.8
Turbidity (NTU):	23

Photo Log

Photographer:	NTB
Upstream Photo:	1187
Downstream Photo:	1188

Notes/Observations/Drawings:

Initial and Date: 4/25/18 DZ

Station ID:	CT09
Sample Date:	4-25-18
Sample Time:	1200

Sampling

Clean hands:	NTB
Dirty hands:	JWA
# Containers:	2

GPS

Latitude:	
Longitude:	
Operator:	

Flow

Total Q:	NA
Operator:	NA

In Situ WQ

Operator:	TML
DO (mg/L):	8.85
pH:	7.85
Temperature (C):	16.87
Sp. Cond. (µS/cm):	171.8
Turbidity (NTU):	15

Photo Log

Photographer:	NTB
Upstream Photo:	1189
Downstream Photo:	1190

Notes/Observations/Drawings:

CT09-04/18 D @ 1205 / 2 containers

Poison ivy present

Initial and Date: 4/25/18 DC

Station ID:	CT10
Sample Date:	4-25-18
Sample Time:	1215

Sampling

Clean hands:	NTB
Dirty hands:	JWA
# Containers:	2

GPS

Latitude:	
Longitude:	
Operator:	

Flow

Total Q:	NA
Operator:	NA

In Situ WQ

Operator:	DMC
DO (mg/L):	8.80
pH:	7.94
Temperature (C):	15.53
Sp. Cond. (μS/cm):	230.8
Turbidity (NTU):	6.6

Photo Log

Photographer:	NTB
Upstream Photo:	1191
Downstream Photo:	1192

Notes/Observations/Drawings:

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Initial and Date: DL 4/25/18

Station ID:	CR01
Sample Date:	4-25-18
Sample Time:	1330

Sampling

Clean hands:	NTB
Dirty hands:	JWA
# Containers:	2

GPS

Latitude:	
Longitude:	
Operator:	

Flow

Total Q:	NA
Operator:	

In Situ WQ

Operator:	DMC
DO (mg/L):	8.10
pH:	7.93
Temperature (C):	16.09
Sp. Cond. (μS/cm):	105.2
Turbidity (NTU):	55

Photo Log

Photographer:	DMC
Upstream Photo:	1193
Downstream Photo:	1194

Notes/Observations/Drawings:

Sample from dock, floating dock

Initial and Date: _____

Station ID:	
Sample Date:	
Sample Time:	

Sampling

Clean hands:	
Dirty hands:	
# Containers:	

GPS

Latitude:	
Longitude:	
Operator:	

Flow

Total Q:	
Operator:	

In Situ WQ

Operator:	
DO (mg/L):	
pH:	
Temperature (C):	
Sp. Cond. ($\mu\text{S}/\text{cm}$):	
Turbidity (NTU):	

Photo Log

Photographer:	
Upstream Photo:	
Downstream Photo:	

4/26/18

Notes/Observations/Drawings:

Initial and Date:

Data Sonde Calibration Form

Sonde#: 549609		Model: SMARTROLL				
DATE/TIME	Begin	4-20-18 / 1300	4-23-18 / 1315	4-24-18 / 1900	/	/
	End	4-25-18 / 1315	4-24-18 / 1900	4/26/18 / 1440	/	/
CONDUCTIVITY 12,500 (µs/cm)	Pre-Cal	12886.1	12600.3	12485.9		
	Post-Cal	12506.2	12502.6	12504.5		
	End Check	12600.3	12485.9	12249		
pH 7	Pre-Cal	7.16	7.00	7.11		
	Post-Cal	6.98	7.00	6.96		
	End Check	7.00	7.11	6.90		
pH 4	Pre-Cal	4.18	3.96	4.08		
	Post-Cal	4.00	4.00	4.00		
	End Check	3.96	4.08	4.01		
pH 10 (Read Only)	Read Only	10.13	10.08	9.99		
	End Check	10.08	10.18	9.96		
BAROMETRIC PRESSURE (mmHg)	Begin	750	742	756		
	End	742	736	740		
TEMPERATURE Thermistor / NIST	Begin	20.91 / 21.1	21.68 / 21.8	19.45 / 19.9	/	/
	End	/	19.45 / 19.9	21.4 / 21.6	/	/
Dissolved Oxygen (mg/L) (Compare to Chart)	Pre-Cal	8.94	8.58	8.83		
	Post-Cal	8.83	8.60	8.90		
	Chart Value	8.81	8.58	8.70		
	End Check	8.59	8.83	8.69		
	Chart Value	8.58	8.90	8.67		
DISSOLVED OXYGEN %	Pre-Cal	101.2	99.9	99.2		
	Post-Cal	100.1	99.9 / 100.1	100.0		
	End Check	99.9	99.2	100.0		
BATTERY (Volts)	Begin	NA				
	End	NA				
OPERATOR	Begin	DL	DL	DL		
	End	DL	DL	JMK		

Standard	Manufacturer	Lot	Expiration
Conductivity	Myron L	121470CA	028MAR19
pH 4	Fisher	177238	10/2019
pH 7	Fisher	177435	10/2019
pH 10	Fisher	176507	9/2019
1.0 NTU	Amco	7987	2/2019
10.0 NTU	Amco	800171	2/2019
100.0 NTU	Amco	18023351	2/2019
NIST	Fisher	335	9/26/2018

Initial and Date:

DL 4/26/18

Data Sonde Calibration Form						
Sonde#:				Model:		
DATE/TIME	Begin	4-20-18 / 1300	4-25-18 / 1345	/	/	/
	End	4-25-18 / 1345	/	/	/	/
CONDUCTIVITY 12,500 (µs/cm)	Pre-Cal	13038.1	12498.3			
	Post-Cal	12497.4	12499.5			
	End Check	12498.3				
pH 7	Pre-Cal	7.13	7.00			
	Post-Cal	7.02	6.98			
	End Check	7.00				
pH 4	Pre-Cal	4.14	3.98			
	Post-Cal	4.00	4.00			
	End Check	3.98				
pH 10 (Read Only)	Read Only	10.05	10.13			
	End Check	10.05				
BAROMETRIC PRESSURE (mmHg)	Begin	750	742			
	End	742				
TEMPERATURE Thermistor / NIST	Begin	20.90 / 21.1	21.68 / 22.0	/	/	/
	End	21.68 / 22.0	/	/	/	/
Dissolved Oxygen (mg/L) (Compare to Chart)	Pre-Cal	8.85	8.50			
	Post-Cal	8.83	8.57			
	Chart Value	8.81	8.58			
	End Check	8.59				
	Chart Value	8.50				
DISSOLVED OXYGEN %	Pre-Cal	100.3	99.8			
	Post-Cal	100.0	99.8			
	End Check	99.8				
BATTERY (Volts)	Begin	NA				
	End	NA				
OPERATOR	Begin	DL	DL			
	End	DL				

Initial and Date: DL 4/26/18

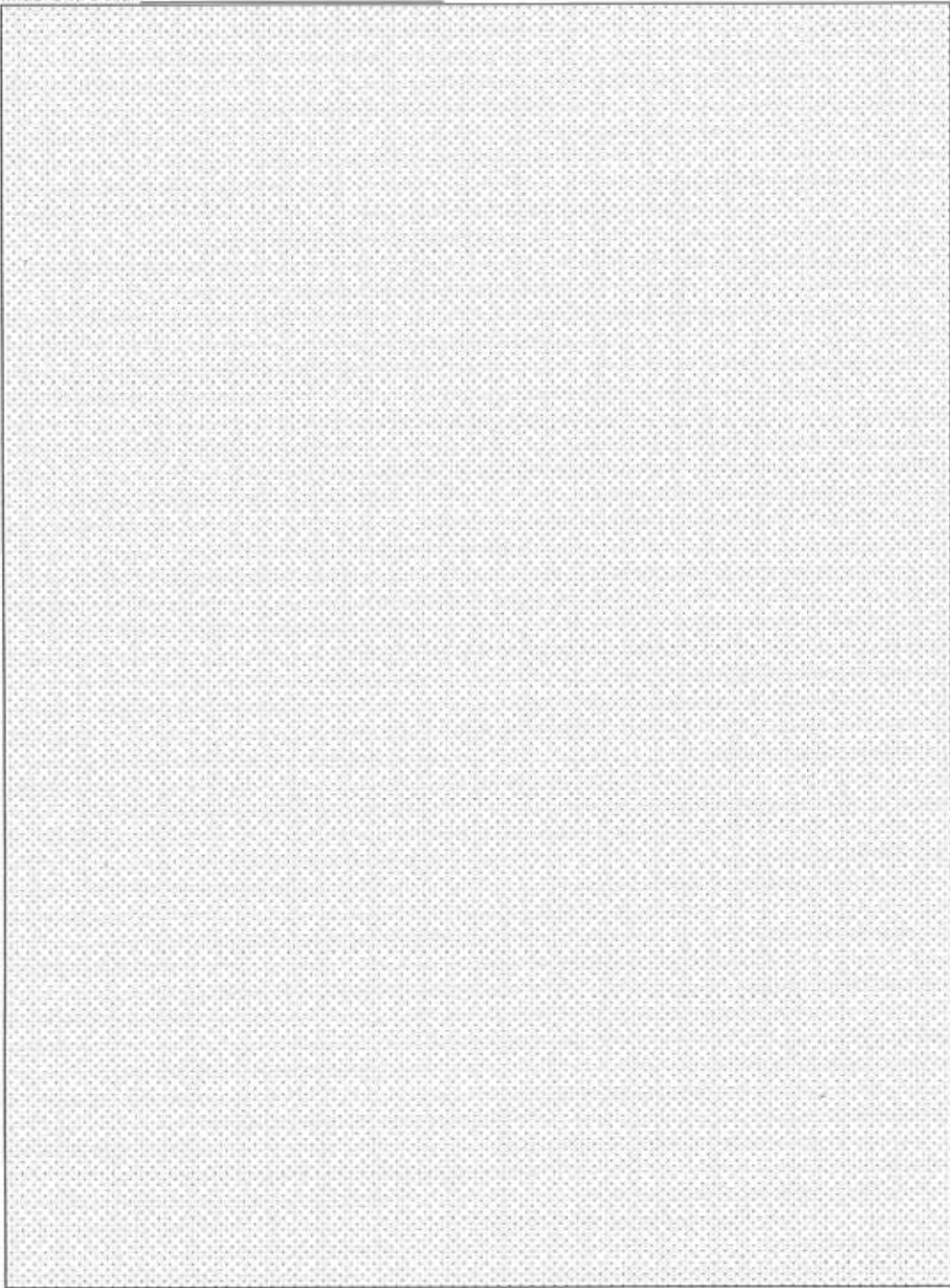
		LaMotte Calibrations				
Date/Time	Begin	4/24/18 1250	4/25/18 920			
	End	4/24/18 1935	4/25/18 1450			
0 (NTU)	Pre-Cal	0	0			
	Post-Cal	0	0			
	End Check	0	0			
100 (NTU)	Pre-Cal	100	100			
	Post-Cal	100	100			
	End Check	100	100			
Operator	Begin	DL	DL			
	End	DL	DL			

End of Logback

DL 4/26/18



Initial and Date: _____



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Initial and Date: _____

END OF LOGBOOK

END OF REPORT